

HP High-Definition DLP™ TV
User's Guide
IDB5220N, ID5226N, ID5286N



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Hewlett Packard Company
10955 Tantau Avenue
Cupertino, CA 95014

Limited Warranty, Refurbished Limited Warranty, and License Information

Hardware Limited Warranty

	New	Refurbished
HP Microdisplay TV (excluding items listed below)	One year Limited parts & labor warranty	90 days Limited parts & labor warranty
HP Microdisplay TV Lamp Module (included with the TV or purchased separately)	90 days Limited hardware warranty	90 days Limited hardware warranty
Technical phone assistance to diagnose potential hardware issues	One year	90 days

General Terms

This HP Hardware Limited Warranty gives you, the customer, express limited warranty rights from HP, the manufacturer. Please refer to HP's Web site for an extensive description of your limited warranty entitlements. In addition, you may also have other legal rights under applicable local law or special written agreement with HP.

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THE LIMITED WARRANTY TERMS CONTAINED IN THIS STATEMENT, EXCEPT TO THE EXTENT LAWFULLY PERMITTED, DO NOT EXCLUDE, RESTRICT, OR MODIFY BUT ARE IN ADDITION TO THE MANDATORY STATUTORY RIGHTS APPLICABLE TO THE SALE OF THIS PRODUCT TO YOU.

This Limited Warranty is applicable in all countries/regions and may be enforced in any country/region where HP or its authorized service providers offer warranty service for the same product model number subject to the terms and conditions set forth in this Limited Warranty.

Under the HP Global Limited Warranty program, products purchased in one country/region may be transferred to another country/region, where HP or its authorized service providers offer warranty service for the same product model number, without voiding the warranty. Warranty terms, service availability, and service response times may vary from country/region to country/region. Standard warranty service response time is subject to change due to local parts availability. If so, your HP authorized service provider can provide you with details.

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This Limited Warranty applies only to HP-branded and Compaq-branded hardware products (collectively referred to in this Limited Warranty as "HP Hardware Products") sold by or leased from Hewlett-Packard Company, its worldwide subsidiaries, affiliates, authorized resellers, or country/region distributors (collectively referred to in this Limited Warranty as "HP") with this Limited Warranty. The term "HP Hardware Product" is limited to the hardware components and required firmware. The term "HP Hardware Product" DOES NOT include any software applications or programs; non-HP products, or non-HP branded peripherals. All non-HP products or non-HP-branded peripherals external to the HP Hardware Product – such as external storage subsystems, displays, printers, and other peripherals – are provided

“AS IS” without HP warranty. However, non-HP manufacturers and suppliers or publishers may provide their own warranties directly to you.

HP warrants that the HP Hardware Products that you have purchased or leased from HP are free from defects in materials or workmanship under normal use during the Limited Warranty Period. The Limited Warranty Period starts on the date of purchase or lease from HP, or from the date HP completes installation. Your dated sales or delivery receipt, showing the date of purchase or lease of the product, is your proof of the purchase or lease date. You may be required to provide proof of purchase or lease as a condition of receiving warranty service. You are entitled to hardware warranty service according to the terms and conditions of this document if a repair to your HP Hardware Product is required within the Limited Warranty Period.

Unless otherwise stated, and to the extent permitted by local law, new HP Hardware Products may be manufactured using new materials or new and used materials equivalent to new in performance and reliability. HP may repair or replace HP Hardware Products (a) with new or previously used products or parts equivalent to new in performance and reliability, or (b) with equivalent products to an original product that has been discontinued. Replacement parts are warranted to be free from defects in material or workmanship for ninety (90) days, or for the remainder of the Limited Warranty Period of the HP Hardware Product they are replacing or in which they are installed, whichever is longer.

During the Limited Warranty Period, HP will, at its discretion, repair or replace any defective component. All component parts or hardware products removed under this Limited Warranty become the property of HP. In the unlikely event that your HP Hardware Product has recurring failures, HP, at its sole discretion, may elect to provide you with (a) a replacement unit of HP's choosing that is the same or equivalent to your HP Hardware Product in performance, or (b) to give you a refund of your purchase price or lease payments (less interest) instead of a replacement. This is your exclusive remedy for defective products.

Exclusions

HP does not warrant that the operation of this product will be uninterrupted or error-free. HP is not responsible for damage that occurs as a result of your failure to follow the instructions intended for the HP Hardware Product.

This Limited Warranty does not apply to expendable or consumable parts and does not extend to any product from which the serial number has been removed or that has been damaged or rendered defective (a) as a result of accident, misuse, abuse, contamination, improper or inadequate maintenance or calibration, or other external causes; (b) by operation outside the usage parameters stated in the user documentation that shipped with the product; (c) by software, interfacing, parts, or supplies not supplied by HP; (d) by improper site preparation or maintenance; (e) by virus infection; (f) from loss or damage in transit; or (g) by modification or service by anyone other than (i) HP, (ii) an HP authorized service provider, or (iii) your own installation of end-user-replaceable HP or HP-approved parts if available for your product in the servicing country/region.

Exclusive Remedy

TO THE EXTENT ALLOWED BY APPLICABLE LOCAL LAW, these terms and conditions constitute the complete and exclusive warranty agreement between you and HP regarding the HP Hardware Product you have purchased or leased. These terms and conditions supersede any prior agreements or representations – including representations made in HP sales literature or advice given to you by HP or an agent or employee of HP – that may have been made in connection with your purchase or lease of the HP Hardware Product. No change to the conditions of this Limited Warranty is valid unless it is made in writing and signed by an authorized representative of HP.

Limitation of Liability

IF YOUR HP HARDWARE PRODUCT FAILS TO WORK AS WARRANTED ABOVE, HP'S MAXIMUM LIABILITY UNDER THIS LIMITED WARRANTY IS EXPRESSLY LIMITED TO THE LESSER OF THE PRICE YOU HAVE PAID FOR THE PRODUCT OR THE COST OF REPAIR OR REPLACEMENT OF ANY HARDWARE COMPONENTS THAT MALFUNCTION IN CONDITIONS OF NORMAL USE.

EXCEPT AS INDICATED ABOVE, IN NO EVENT WILL HP BE LIABLE FOR ANY DAMAGES CAUSED BY THE PRODUCT OR THE FAILURE OF THE PRODUCT TO PERFORM, INCLUDING ANY LOST PROFITS OR SAVINGS OR SPECIAL, INCIDENTAL, OR CONSEQUENTIAL DAMAGES. HP IS NOT LIABLE FOR ANY CLAIM MADE BY A THIRD PARTY OR MADE BY YOU FOR A THIRD PARTY.

THIS LIMITATION OF LIABILITY APPLIES WHETHER DAMAGES ARE SOUGHT, OR A CLAIM MADE, UNDER THIS LIMITED WARRANTY OR AS A TORT CLAIM (INCLUDING NEGLIGENCE AND STRICT PRODUCT LIABILITY), A CONTRACT CLAIM, OR ANY OTHER CLAIM. THIS LIMITATION OF LIABILITY CANNOT BE WAIVED OR AMENDED BY ANY PERSON. THIS LIMITATION OF LIABILITY WILL BE EFFECTIVE EVEN IF YOU HAVE ADVISED HP OR AN AUTHORIZED REPRESENTATIVE OF HP OF THE POSSIBILITY OF ANY SUCH DAMAGES. THIS LIMITATION OF LIABILITY, HOWEVER, WILL NOT APPLY TO CLAIMS FOR PERSONAL INJURY.

THIS LIMITED WARRANTY GIVES YOU SPECIFIC LEGAL RIGHTS. YOU MAY ALSO HAVE OTHER RIGHTS THAT MAY VARY FROM STATE TO STATE OR FROM COUNTRY/REGION TO COUNTRY/REGION. YOU ARE ADVISED TO CONSULT APPLICABLE STATE OR COUNTRY/REGION LAWS FOR A FULL DETERMINATION OF YOUR RIGHTS.

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Limited Warranty Period

The Limited Warranty Period for an HP Hardware Product is a specified, fixed period commencing on the date of purchase. The date on your sales receipt is the date of purchase unless HP or your reseller informs you otherwise in writing.

Types of Warranty Service

To enable HP to provide the best possible support and service during the Limited Warranty Period, you may be directed by HP to verify configurations, load most recent firmware, install software patches, run HP diagnostics tests, or use HP remote support solutions where applicable.

HP strongly encourages you to accept the use of, or to employ available support technologies provided by HP. If you choose not to deploy available remote support capabilities, you may incur additional costs due to increased support resource requirements. Listed below are the types of warranty support service that may be applicable to the HP Hardware Product you have purchased.

In-Home Warranty Service

Your HP Limited Warranty service may include in-home labor support to repair your hardware. HP provides in-home service during standard office hours. Standard office hours are typically 8:00 a.m. to 5:00 p.m., Monday through Friday, but may vary with local business practices. If your location is outside the customary service zone (typically 50 km) response times may be longer or there may be additional charges. To locate the nearest HP authorized service provider refer to the HP Web site at: **www.hp.com/support**

HP may, at its sole discretion, determine if in-home warranty service is required. For example, in many cases, the defect can be fixed by the use of a customer self repair (CSR) part that you are required to replace yourself based on instructions and documentation provided by HP. You are also required to cooperate with HP in attempting to resolve the problem over the telephone. This may involve performing routine diagnostic procedures, removing third-party options, and/or substituting options. In order to receive in-home support, you must: (a) have a representative present when HP provides warranty services at your site; (b) notify HP if products are being used in an environment which poses a potential health or safety hazard to HP employees or subcontractors; (c) subject to its reasonable security requirements, provide HP with sufficient, free, and safe access to and use of all facilities, information, and systems determined necessary by HP to provide timely support; (d) ensure that all manufacturers labels (such as serial numbers) are in place, accessible, and legible; and (e) maintain an environment consistent with product specifications and supported configurations.

If you require an HP representative to handle all component replacements, support uplift contracts are available at additional cost.

Carry-in Warranty Service

Under the terms of carry-in service, you will be required to deliver your HP Hardware Product to an authorized service location for warranty repair. You must prepay any shipping charges, taxes, or duties associated with transportation of the product to and from the service location. In addition, you are responsible for insuring any product shipped or returned to an authorized service location and assume risk of loss during shipping.

Advanced Unit Replacement Warranty Service

Your HP Limited Warranty may include an advance unit replacement warranty service. Under the terms of the advanced unit replacement warranty service, if a unit is diagnosed as defective, HP will ship a replacement product directly to you. On receiving the replacement unit you will be required to return the defective unit back to HP, in the packaging that arrives with the replacement unit, within a defined period of time, normally fifteen (15) days. HP will incur all shipping and insurance costs to return the defective unit to HP. Failure to return the defective unit may result in HP billing you for the replacement product.

Customer Self Repair Warranty Service

In countries/regions where it is available, your HP Limited Warranty may include a customer self repair warranty service. If applicable, HP will determine at its sole discretion that customer self repair is the appropriate method of warranty service. If so, HP will ship approved replacement parts directly to you to fulfill your HP Hardware Product warranty service. This will save considerable repair time. After you contact HP and the fault diagnosis identifies that the problem can be fixed using one of these parts, a replaceable part can be sent directly to you. Once the part arrives, replace the defective part pursuant to the provided instructions and documentation. If further assistance is required, call the HP Technical Support Center and a technician will assist you over the phone. In cases where the replacement part must be returned to HP, you must ship the defective part back to HP within a defined period of time, normally fifteen (15) days. The defective part must be returned with the associated documentation in the provided shipping material. Failure to return the defective product may result in HP billing you for the replacement. With a customer self repair, HP will pay all shipping and part return costs and determine the courier/carrier to be used. If customer self repair applies to you, refer to your specific HP Hardware Product announcement. You can also obtain information on this warranty service on the HP Web site at: **www.hp.com/support**

Contacting HP

If your product fails during the Limited Warranty Period and the suggestions in the product documentation do not solve the problem, you can get support through any of the following:

- HP Customer Care on the Web offers instant access to support information and e-mail support with on-line support technicians. Visit our Web site at: **www.hp.com/support**
- HP Total Care is available toll-free by phone. Be sure to have the following product information available when you call HP:
 - Serial Number
 - Product Number
 - Model Name and Number
 - Details for your questions
- Contact HP Total Care at: 1-800-474-6836
[1-800-HP Invent]
- Contact an HP Authorized Support Provider. Use our service locator to find an HP Authorized Support Provider near you. Go to: **www.hp.com/support**

Register Now

Go to: <http://register.hp.com>

Registration is quick and easy, and it offers:

- Email updates containing notifications about products and the most recent support alerts.
- The HP Newsgram, our monthly online magazine packed full of product news, support tips, project ideas, and much more. Visit us at: <http://subscription.support.hp.com>

Protect Your Investment

Obtaining a Warranty Upgrade

Upgrade your standard factory warranty for up to 3 years of coverage with an extended service plan. Service coverage begins on product purchase date and you must purchase the service within the first year after purchasing the TV.

For more information visit:

www.hp.com/go/totalcare (U.S. only)

or call:

1-866-234-1377

Or

www.hp.ca/totalcare (Canada only)

or call:

1-877-231-4351

Installation

Visit HPshopping at <http://hpshopping.com> (U.S.) or <http://hpshopping.ca> (Canada) for information on HP installation services.

The information contained herein is subject to change without notice.

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Safety Markings and Warnings



CAUTION: The HP television stand is included in select models. The screws supplied with the television stand must be used to attach the stand to the television to avoid injury from tipping. Only use the screws provided with these HP television stand models TS-5220 and TS-5226. Please follow the instructions provided with the stand for proper installation.

The following safety markings may be present on the rear of the television:



CAUTION ! To prevent electric shock, do not remove this cover. No user serviceable parts inside. Refer servicing to qualified service personnel.
WARNING ! To reduce the risk of fire or electric shock, do not expose this apparatus to rain or moisture.
SERVICE PERSONNEL WARNING ! Eye damage may result from directly viewing the light produced by the lamp used in this apparatus. Always turn off lamp before opening this cover. Ultraviolet radiation eye protection required during servicing.

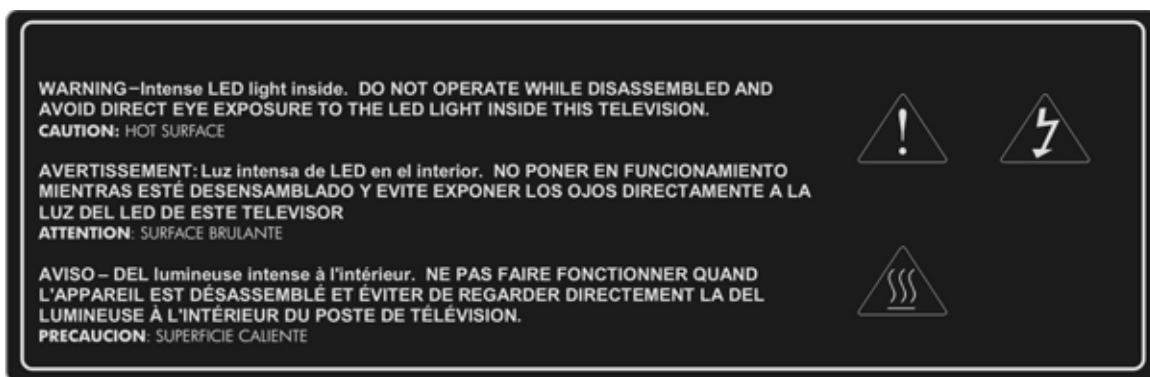
ATTENTION ! Pour éviter les risques d'électrocution, ne retirez pas ce capot. Aucun composant à l'intérieur ne peut être réparé par l'utilisateur. Confiez la maintenance uniquement à du personnel qualifié.
AVERTISSEMENT ! Pour réduire les risques d'incendie et d'électrocution, n'exposez pas cet appareil à la pluie ou à l'humidité.
AVERTISSEMENT À L'INTENTION DU PERSONNEL DE MAINTENANCE ! Ne regardez pas directement la lampe utilisée dans cet appareil : vous vous exposeriez à des dommages oculaires. Éteignez toujours la lampe avant d'ouvrir le capot. Portez toujours une protection oculaire anti-UV lors de la maintenance de cet appareil.

PRECAUCIÓN ! Para evitar choques eléctricos, no retire esta cubierta. No intente reparar las piezas internas. Lleve el aparato a un servicio técnico cualificado para su reparación.
AVISO ! Para reducir el riesgo de incendio o choque eléctrico, no exponga este aparato a la lluvia o humedad.
AVISO AL SERVICIO TÉCNICO ! Mirar directamente a la luz de la lámpara de este aparato puede hacer daño a los ojos. Apague siempre la lámpara antes de abrir esta cubierta. Protéjase los ojos contra rayos ultravioletas durante la reparación.

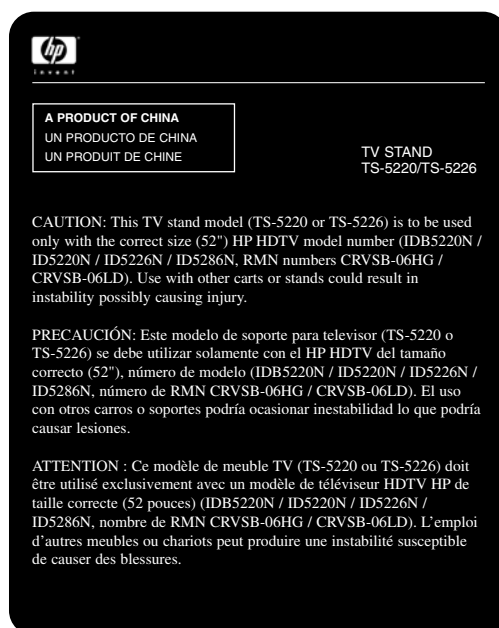
If you have a lamp television, you will have this additional label:









If you have an LED television, you will have this additional label:



If your configuration includes a television stand, the stand will include this label:



Symbols

Symbol	Purpose
	This symbol is intended to alert the user to the presence of dangerous voltage within the television's enclosure that may be of sufficient potential to constitute a risk of electric shock to people.
	This symbol on the television is intended to alert the user to the presence of important operating and maintenance (servicing) instructions in the literature accompanying the television.
	This symbol indicates that the lamp in the television contains mercury. Special disposal of the lamp for environmental reasons may be required under the laws applicable to your jurisdiction. For disposal or recycling information, please contact your local authorities or the Electronic Industries Alliance.
	This symbol is intended to alert the user to the presence of ultraviolet light.
	This symbol is intended to alert the user to the presence of a potentially hot surface.
	This symbol is intended to alert the user to the presence of a potential tip-over hazard.

Important Safety Instructions



CAUTION: Read and follow these precautions and all other instructions in this manual to reduce the risk of injury and equipment damage.

1. Read these instructions.
2. Keep these instructions.
3. Heed all warnings.
4. Follow all instructions.
5. Do not use this apparatus near water.
6. Clean only with a dry cloth.
7. Do not block any ventilation openings. Install in accordance with manufacturer's instructions.
8. Do not install near any heat sources such as radiators, heat registers, stoves, or other apparatus (including amplifiers) that produce heat.
9. Do not defeat the safety purpose of the polarized or grounding-type plug. A polarized plug has two blades with one wider than the other. A grounding type plug has two blades and a third grounding prong. The wide blade or the third prong are provided for your safety. If the provided plug does not fit into your outlet, consult an electrician for replacement of the obsolete outlet.
10. Protect the power cord from being walked on or pinched particularly at plugs, convenience receptacles, and the point where they exit from the apparatus.
11. Only use attachments/accessories specified by the manufacturer.

12.



CAUTION: Use only with the cart, stand, tripod, bracket, or table specified by the manufacturer, or sold with the apparatus. When a cart is used, use caution when moving the cart/apparatus combination to avoid injury from tip-over.

13. Unplug this apparatus during lightning storms or when unused for long periods of time.

14. Refer all servicing to qualified service personnel. Servicing is required when the apparatus has been damaged in any way, such as power-supply cord or plug is damaged, liquid has been spilled or objects have fallen into the apparatus, the apparatus has been exposed to rain or moisture, does not operate normally, or has been dropped.

15.



CAUTION: To avoid personal injury or damage to the television, always use at least two people to lift or move it.

16. If the television is moved from a cold area, do not turn the television on for a few hours. This will allow the unit to warm sufficiently to evaporate any condensation.

17. Install the television upright on a horizontal, solid, flat surface away from excessive heat, dust, and vibration.

18. Keep a clearance of at least 4 inches (10 cm) between the vents on the back and/or sides of the television and nearby walls or enclosures. Allow free air circulation to prevent excessive heat build up that could cause the set to shut down or damage the television. Keep flammable objects susceptible to heat damage at least 2 feet (0.5 m) away from the television's vents.

19. Do not allow food, small objects, or liquid to get inside the television. If this should occur, contact HP for assistance. There are no user-serviceable parts inside except as described elsewhere in this manual.

20. Operate only from the type of power source indicated on the marking label. If you are not sure of the type of power supplied to your home, consult your television dealer or local power company.

21. Do not handle the power cord with wet hands. Doing so may cause electric shock.

22. Do not place hands, face, or other objects near the ventilation holes of the television. Because the ventilation holes release heat, doing so could result in damage to the television or personal injury.

23.



CAUTION: Use only with a cart, stand, tripod, bracket, hardware, or table as specified by HP. When a cart is used, use caution when moving the television to avoid injury from tipping over. **USE WITH AN UNAPPROVED CART, STAND, BRACKET, HARDWARE, OR TABLE MAY RESULT IN INSTABILITY AND POSSIBLE INJURY.**

24.



WARNING! To prevent electrical shock or injury, do not remove cover except in accordance with the instructions provided in Section 5 of "Fixing Problems" on page 41 of this User's Guide when replacing the lamp module. Because there are no user serviceable parts inside this television other than the lamp module, any servicing other than replacement of the lamp module should be referred to qualified service personnel only. Under no circumstances should anyone other than a qualified service technician attempt to remove the cover of this television or service it except to replace the lamp module in accordance with the instructions provided in this User's Guide.

25. Servicing is required if the television has been damaged in any way, such as if the power cord or power plug is damaged, liquid has been spilled or objects have fallen into the television, or the television has been exposed to rain or moisture, does not operate normally, or has been dropped.

26.



WARNING! **LED BASED TELEVISION:** AT NO TIME SHOULD THIS TELEVISION EVER BE OPERATED WHILE DISASSEMBLED IN ANY MANNER. THIS TELEVISION USES LIGHT EMITTING DIODES (LEDs) AS A LIGHT SOURCE, WHICH PRODUCE EXTREMELY INTENSE LIGHT. EXPOSURE TO THE LIGHT PRODUCED BY THESE LEDs WITHOUT PROPER EYE PROTECTION MAY RESULT IN SEVERE AND PERMANENT EYE DAMAGE.

27. If any of the following conditions occur, immediately unplug the television from the wall outlet and contact a qualified service technician to repair:
- a. If the power cord or plug becomes damaged or frayed, do not attempt to unplug — locate the appropriate circuit breaker and disable the outlet;
 - b. If the television has been exposed to rain, water, or other liquid;
 - c. If the television does not operate normally when operated as instructed in the operating instructions, adjust only those controls that are covered by the operating instructions — improper adjustment of other controls may result in damage to the television that could require extensive work by a qualified technician to restore to the television to normal operation;
 - d. If the television has been dropped or the cabinet has been damaged;
 - e. If the television exhibits a distinct change in performance — this usually indicates that service is required.
28. Should repair become necessary, advise the service technician servicing your television to use parts specified by the manufacturer. Unauthorized substitutions may result in fire, electrical shock, or other hazards.

29.



WARNING! KEEP SMALL PARTS AND OTHER OBJECTS OUT OF THE REACH OF SMALL CHILDREN. THESE OBJECTS CAN BE ACCIDENTALLY SWALLOWED AND RESULT IN CHOKING, SUFFOCATION, OTHER INJURIES AND POSSIBLY DEATH. ADDITIONALLY KEEP ALL PACKAGING MATERIALS OUT THE REACH OF SMALL CHILDREN. THESE ITEMS MAY PRESENT A SUFFOCATION HAZARD AND CAUSE SERIOUS INJURY OR DEATH

30.



WARNING! Keep all packaging materials out of the reach of small children. These items may cause choking, suffocation, other serious injury, and possibly death.

31. **CAUTION:** Do not disconnect power until the television has cooled and the fan stops running — up to three minutes after turning it off. Otherwise, you might shorten the life of the lamp.
32. **CAUTION:** If power is removed from the television, wait more than two minutes before attempting to turn on the television. Otherwise, you might shorten the life of the lamp.

33.



CAUTION:

Replacing the lamp module requires special considerations:

- Carefully read the complete instructions for “Replacing the Lamp Module” on page 41 before replacing the lamp module.
- To reduce the risk of injury, use extreme care when removing the lamp module, because broken glass might be present.
- The lamp contains a small amount of mercury. If the lamp breaks, adequately ventilate the area where the breakage occurred, discard any nearby food and drink, and thoroughly clean the table surface around the television. Wash your hands after cleaning the area or handling a broken lamp. Disposal of this lamp might be regulated because of environmental considerations.

34.

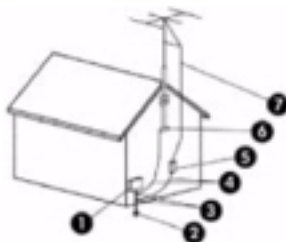


CAUTION:

We recommend that the lamp be exchanged at or before the end of the lamp's rated life – 6000 hours of use – because after that, the risk of the lamp rupturing could increase. High-temperature glass fragments from a ruptured bulb can cause injury, fire, or damage to property.

In addition to these general precautions, be sure to observe the following precautions when using external television antennas and cable systems with your new television. Failure to observe these precautions could result in fire, bodily injury, and damage to your television.

- Call the CATV (cable television) system installer's attention to Section 820-40 of the NEC (U.S. National Electrical Code, ANSI/NFPA 70), or Canadian Electrical Code (CAN/CSA-C22.2 No. 1), which provides guidelines for proper grounding and, in particular, specifies that the cable ground must be connected to the grounding system of the building, as close to the point of cable entry as practical.
- If an outside antenna or cable system is connected to the television, be sure the antenna or cable system is electrically grounded to protect against voltage surges and built up static charges. Article 810 of the NEC (U.S. National Electrical Code, ANSI/NFPA 70) or Canadian Electrical Code (CAN/CSA-C22.2 No. 1) provides information about proper electrical grounding of the mast and supporting structure, grounding of the “lead-in” wire to an antenna discharge unit, size of grounding conductors, location of the antenna discharge unit, connection to grounding electrodes, and requirements of the grounding electrode.
- Do not place an outside antenna in the vicinity of overhead power lines or other electric light or power circuits, or where it could fall on power lines or circuits. When installing an outside antenna system, take extreme care to avoid touching overhead power lines that may be present at your location.



Item	Description
1	Electric service equipment
2	Power service grounding electrode system (NEC Art 250, Part H)
3	Ground clamps
4	Grounding conductors (NEC Section 810-21)
5	Antenna discharge unit (NEC Section 810-20)
6	Ground clamp
7	Antenna “lead-in” wire



WARNING!

To reduce the risk of fire or electric shock, do not expose this television to rain or moisture. The television should not be used outdoors or exposed to dripping or splashing. Objects filled with liquids such as vases should not be placed on the television.

Safety Information

Mercury Safety



WARNING! This television lamp contains a small amount of mercury. If the lamp breaks, adequately ventilate the area where the breakage occurred, discard any nearby food and drink, and thoroughly clean the table surface around the television. Wash your hands after cleaning the area or handling a broken lamp. Disposal of this lamp may be regulated due to environmental considerations. For disposal or recycling information, contact your local authorities or the Electronic Industries Alliance at www.eiae.org. You can find safety information about the lamp at www.hp.com/penknife/globalcitizenship/environment/productdata.

Regulatory Information

This section presents information that shows how your TV complies with regulations in certain regions. Any modifications to your TV not expressly approved by HP could void the authority to operate the TV in these regions.

U.S.A.

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

This digital television is capable of receiving analog basic, digital basic, and digital premium cable television programming by direct connection to a cable system providing such programming. A security card provided by your cable operator is required to view encrypted digital programming. Certain advanced and interactive digital cable services such as video-on-demand, a cable operator's enhanced program guide, and data-enhanced television services may require the use of a set-top box. For more information call your local cable operator.

When making connections to peripheral devices, to maintain compliance with FCC Rules and Regulations, use properly shielded cables with this device.

Responsible Party

Manufacturer: Hewlett-Packard

Responsible Party: Hewlett-Packard

Address: Corporate Product Regulations Manager, 3000 Hanover Street, Palo Alto, CA 94304

Telephone: (650) 857-1501

Regulatory Model Number (1): CRVSB-06HG (for lamp HP ID5220N and HP ID5226N) and CRVSB-06LD (for LED HP ID5286N)

(1) For regulatory purposes, these products are assigned a Regulatory Model Number. This number should not be confused with the trade name (HP Pavilion HD) or the product numbers EY808AA (ID5226N), EX543AA (ID5220N), EY809AA (ID5286N).

Table of Contents

Limited Warranty, Refurbished Limited Warranty, and License Information.....	iii
---	------------

Safety Markings and Warnings.....	ix
--	-----------

Symbols.....	xi
Important Safety Instructions.....	xi
Safety Information	xv
Mercury Safety.....	xv
Regulatory Information	xv
U.S.A.	xv
Responsible Party	xv

1 Setting Up the Television	1
--	----------

What's in the Box?	1
Unpackaging and Carrying the Television.....	1
Features	1
Accessories	2
Setting Up Your Television — The Basics.....	2
Planning Your Layout.....	2
Installing Batteries in the Remote Control.....	3
Planning for Other Equipment.....	3
Planning Your System Setup.....	3
Available Connections	4
Back Panel.....	4
Right Side Panel.....	4
Choosing and Locating Your Video Connections	5
Choosing and Locating Your Audio Connections	6
Audio Output Jacks.....	6
DVI Audio Input Jacks	6
Choosing and Completing Your Video Connections	7
Cabling for HDMI, DVI-D, Component, S-Video, and Composite Connections	7
HDMI Connection	7
DVI-to-HDMI Connection	7
Component-Video (YPbPr) Connection	8
S-Video Connection	8
Composite-Video Connection	9
Connecting Your Other Equipment.....	9
Antenna Only.....	10
Antenna and Cable	10
Standard Cable	11
Cable with Set-Top Cable Box	11
Satellite Receiver.....	12
Cable with Cable Box/DVR.....	13
Cable Box and VCR/DVR	14
Satellite Receiver and VCR/DVR	15
DVD Player or Video Gaming Device.....	16
Audio: Stereo Sound System	16
Audio: Surround Sound or AV Receiver	17
Computer	18
Using a CableCARD Module.....	18
What is a CableCARD Module?	18
Installing a CableCARD Module	19
Turning the Television On and Off	19
Plugging in the Power Cord.....	19
Turning on the Television	20

Turning Off the Television	21
Completing the Basic Setup	21
Finding Your Available Channels.....	21
Setting the Time and Date	22
 2 Using the Photo Viewer	23
About Picture Viewer	23
Inserting Your Memory Card Into the Television	23
Removing a Memory Card.....	23
Browsing Pictures.....	24
Tagging and Untagging Pictures.....	24
Viewing a Slideshow	24
Printing Pictures.....	25
Connecting the Printer	25
Printing all pictures.....	25
Printing one picture or multiple copies of one picture.....	25
Printing all tagged photos	26
Clearing the print queue.....	26
Adjusting Photo Viewer Settings.....	26
Troubleshooting Problems	27
 3 Watching Television	29
Overview of the Remote Control.....	29
Using Your Remote Control	30
Changing the Channel.....	30
Adjusting the Volume	31
Viewing Closed Captions	31
Selecting a Video Source.....	32
Using Dual Picture Mode	32
Applying Parental Controls	33
Setting Permission Levels	33
Setting a Simple Lock.....	33
Temporarily Suspending Controls	33
Changing Your Password.....	33
Rating Systems.....	34
 4 Adjusting the Television	35
Adjusting the Size (Aspect) of the Picture.....	35
Adjusting the Picture for Best Color	35
Adjusting Other Picture Settings.....	36
Adjusting Sound Settings	36
Customizing Your Channels and Sources.....	36
Adding or Deleting a Channel	36
Setting Up Favorite Channels	37
Using the On-Screen Menu	37
Changing Settings Using the Menu.....	37
Picture Menu	37
Advanced Picture Menu	38
Sound Menu	38
Source Menu	38
Setup Menu	39

5 Fixing Problems	41
Maintaining the Television.....	41
Cleaning the Television	41
Forgotten Passwords.....	41
Replacing the Lamp Module.....	41
Replacing the LED Module	43
 6 Support and Repair	 45
Contacting HP Technical Support.....	45
 7 Reference Information	 47
Specifications	47

1 Setting Up the Television

What's in the Box?

Before setting up your television, make sure your shipping carton includes the following items. If any are missing, contact HP.

- Television
- Remote Control with two AAA batteries
- Quick Setup Guide
- User's Guide (this manual)

NOTE: The television does not include audio/video cables, because most external equipment includes the required cables. Cables are also available from HP and at most electronics stores.

Unpackaging and Carrying the Television



CAUTION: To avoid injury or damage to the television, use at least two people to lift or move the television. Lift with your legs, not with your back.

NOTE: To lift your new high-definition television, place one hand above the vent on the side panel, and hold the top front corner with the other hand.



WARNING! Keep all packaging materials out of the reach of small children. These items may cause choking, suffocation, other serious injury or possibly death.

Features

Your new high-definition television from HP comes equipped with many features, including the new Photo Viewer. Photo Viewer enables you to view individual photos on your television, have a slideshow of your photos, and even print your photos through the television.

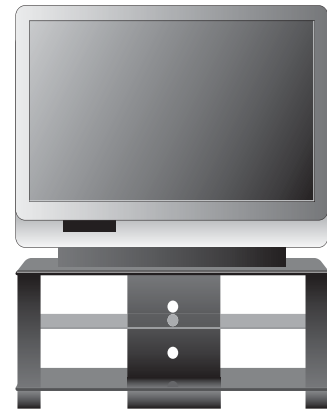
This manual illustrates the television's features, and also its connector types. If you require further assistance with connections, please contact HP.

NOTE: You must use a printer with PictBridge™ technology to print photos using the television.

Accessories

Increase your enjoyment of your new television with genuine HP accessories. You can purchase accessories at www.hpshopping.com, or through your television retailer.

- HP television stand — Sets the television at an ideal viewing height, manages cables, and houses other home entertainment equipment. The HP television stand is included with select models, and setup information is provided in the stand's packaging material.
- HP replacement lamp (ID5220 DLP™) — Installs easily and brings your television up to factory-fresh brightness.
- CableCARD™ module — Lets you add a CableCARD to your television, which simplifies television operation and eliminates the need for a separate cable box.



Setting Up Your Television — The Basics

Planning Your Layout

Consider the following suggestions when planning your room layout:

- The best viewing distance is roughly 9 to 25 ft (3 to 8 m), but personal preferences vary widely. For lengthy viewing of standard-definition television channels, the upper end of this range might be more comfortable.
- For the most comfortable viewing, measure seating distance from the center of the television.
- Design your layout so you can control the ambient light. Many people prefer viewing with minimal lighting, but you should avoid shining bright light directly onto the screen.
- The television can work with a wide variety of input devices — television antenna, cable service, DVD player, audio/video receiver, VCR, personal digital video recorder (DVR), video gaming device, and satellite receiver.
- Try to locate the television's input devices to minimize the lengths of cables connecting them to the television. Use an HP television stand or other quality stand to keep equipment close to the television. If any cable is longer than 10 ft (3 m), consider replacing it with a high-quality, low-loss cable for best video and audio quality.
- For the ultimate home-theater experience, consider including a 5.1 surround sound system, such as a Dolby Digital™ system. This system consists of five speakers and a sub woofer.
- For an external sound system, place all front speakers approximately the same distance from the listener. Place the subwoofer near a wall or corner, and place surround speakers at least as high as the listener's head.

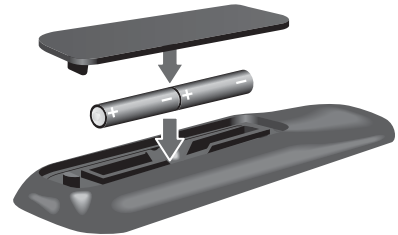


CAUTION: Use only with a cart, stand, tripod, bracket, hardware, or table as specified by HP. When a cart is used, use caution when moving the television to avoid injury from tipping over. **USE WITH AN UNAPPROVED CART, STAND, BRACKET, HARDWARE, OR TABLE MAY RESULT IN INSTABILITY AND POSSIBLE INJURY.**

CAUTION: Keep a clearance of at least 4 in (10 cm) between the vents on the back of the television and nearby walls or enclosures. Allow free air circulation to prevent excessive heat build-up that could cause shutdown or damage the television. Cooling vents are located on the bottom of the television. **DO NOT** place the television on a carpet or other soft surface. Keep flammable objects or objects subject to heat damage at least 2 ft (0.5 m) away from the vents.

Installing Batteries in the Remote Control

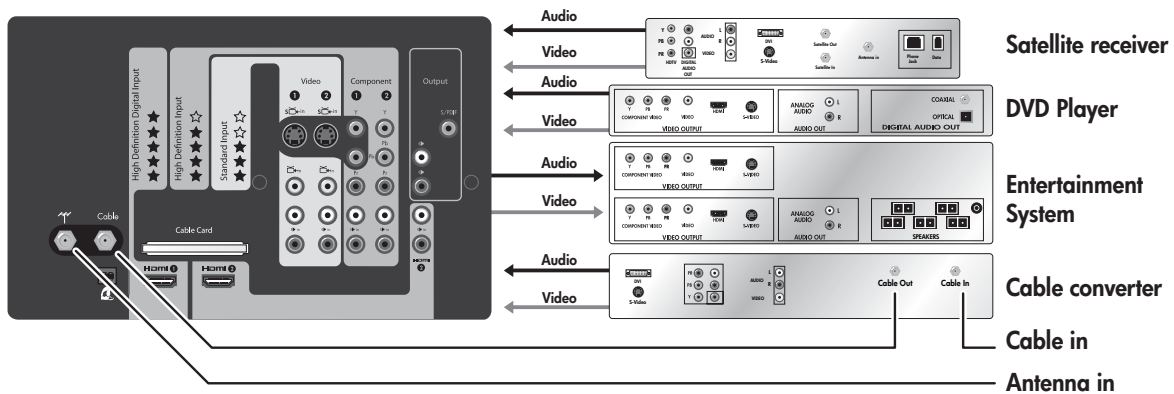
1. On the back of the remote control, press the latch on the battery cover and lift off the cover.
2. Insert two AAA batteries (observe the + marks on the batteries).
3. Insert the tab on the battery cover into the case, and then snap the cover into place.



Planning for Other Equipment

Planning Your System Setup

The way you connect the components of your entertainment system depends on the specific devices you have. The following diagrams show how several common devices could be connected, including the cables between the devices.

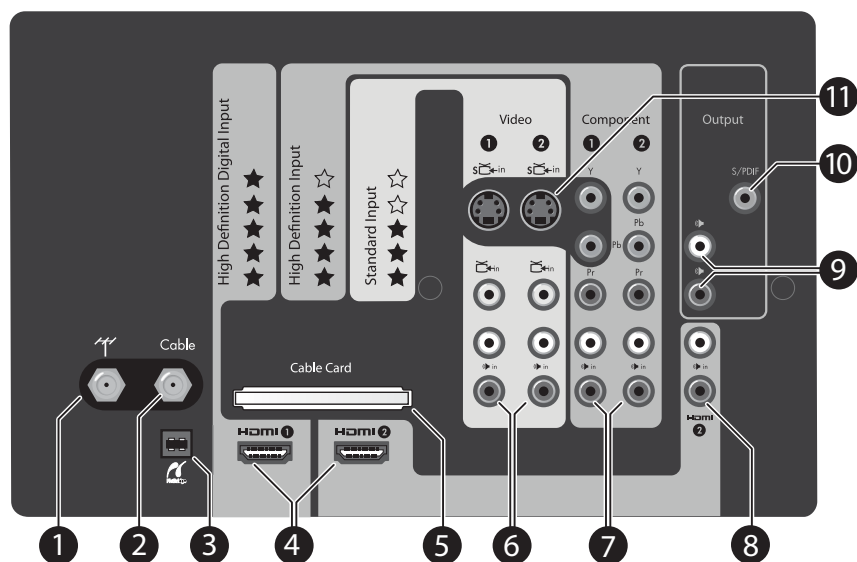


NOTE: Always use the best-quality video output available on your devices, and always use the highest-quality cables.

Available Connections

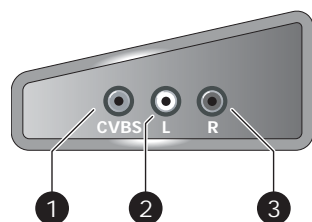
Your television provides convenient access to video and audio cable connections at the rear and side of the unit.

Back Panel



	Item	Function
1	Antenna input connector	Connects an outside VHF/UHF antenna
2	Cable connector	Connects cable services
3	PictBridge connector	For printing photos using a PictBridge-equipped USB printer
4	HDMI™ input connectors	Connects up to two HDMI or DVI-D sources, and provides video and audio
5	CableCARD PCMCIA Slot	CableCARD access slot for premium cable services
6	Composite A/V inputs	Connects composite-video sources with audio
7	Component A/V inputs	Connects component-video sources with audio
8	DVI audio input	Audio connection for DVI-to-HDMI connections
9	Audio outputs	For connecting a home entertainment system
10	Sony/Philips digital interface	Allows transfer of digital audio information without analog conversion
11	S-video connectors	Connects up to two S-Video sources













Right Side Panel



	Item	Function
1	Composite/CVBS input	Provides composite video input (composite video is also referred to as CVBS — color, video, blanking, and sync)
2	Left channel audio input	For connecting external input equipment
3	Right channel audio input	For connecting external input equipment

Choosing and Locating Your Video Connections

Many video devices have more than one type of input or output port. When you connect a device to the television, choose the connection that provides the best picture quality. The following table lists different types of connectors and cables in order of picture quality.

Highest quality		
		HDMI connection. Provides highest-quality, high-definition digital picture and digital surround sound in one connection.
		DVI-to-HDMI connection. Very high quality. Requires separate sound connection. DVI is not available on the television , but may be present on your equipment. If so, an DVI-to-HDMI cable or DVI-to-HDMI adapter is required.
		Component-video connection (YPbPr). High quality, high-definition picture. Requires a separate sound connection.
		S-video connection. Good quality, standard-definition picture. Requires a separate sound connection.
		Composite video connection (yellow). Standard quality, standard-definition picture. Requires a separate sound connection.
		Coaxial antenna or cable connection. Standard for picture and sound from antenna or cable service. Digital signals can carry high-definition programs and surround sound.
Standard Quality		

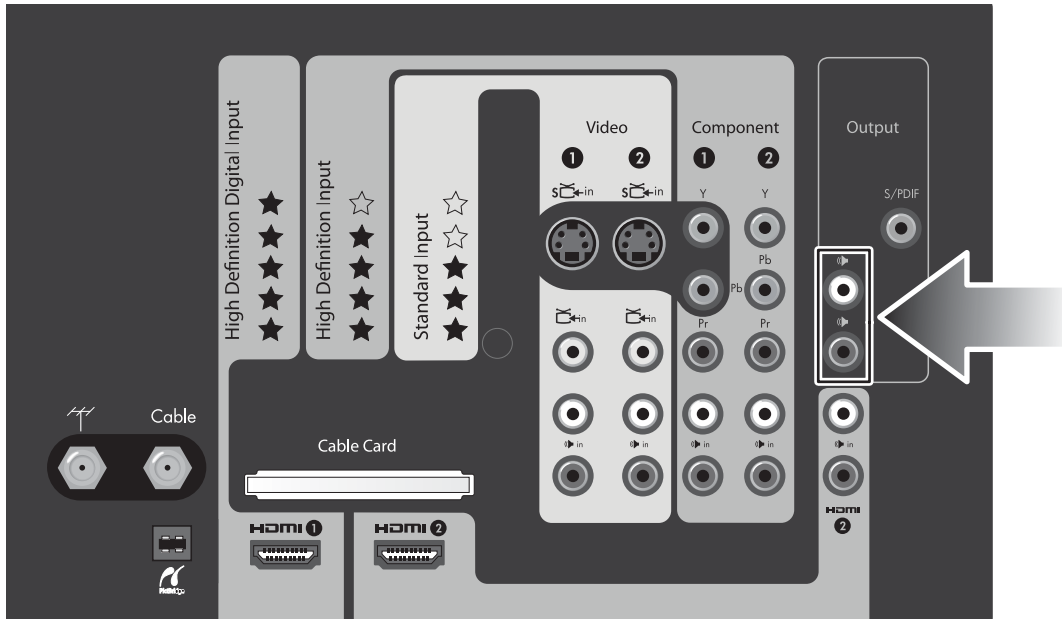
All the connections shown are available on the back panel of your new HP HDTV, except the DVI-to-HDMI connection. Take a few minutes and inspect your home entertainment equipment to find the available ports. Choose the highest-quality connection on each, and use that connection to connect to the television.

TIP: If available, set the video output from your source device to 16:9 aspect (wide-screen picture). Refer to the instructions for the video device. This provides maximum compatibility between the device and the television.

Choosing and Locating Your Audio Connections

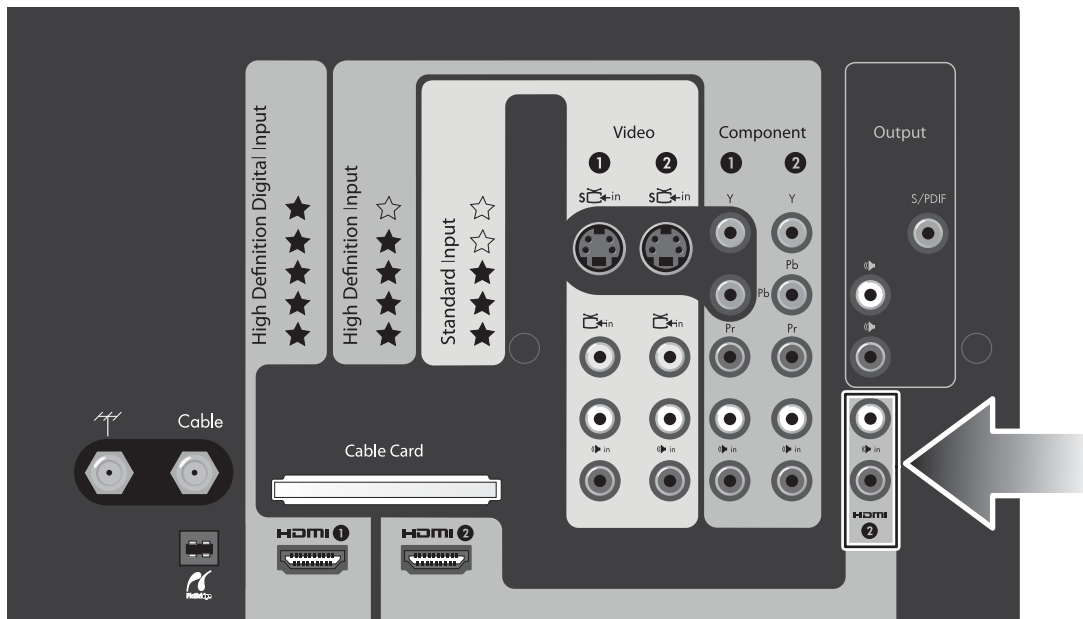
Audio Output Jacks

Connect to an audio receiver or amplifier for fixed-level output.



DVI Audio Input Jacks

Connect your DVI audio cables when using a DVI-to-HDMI connection.



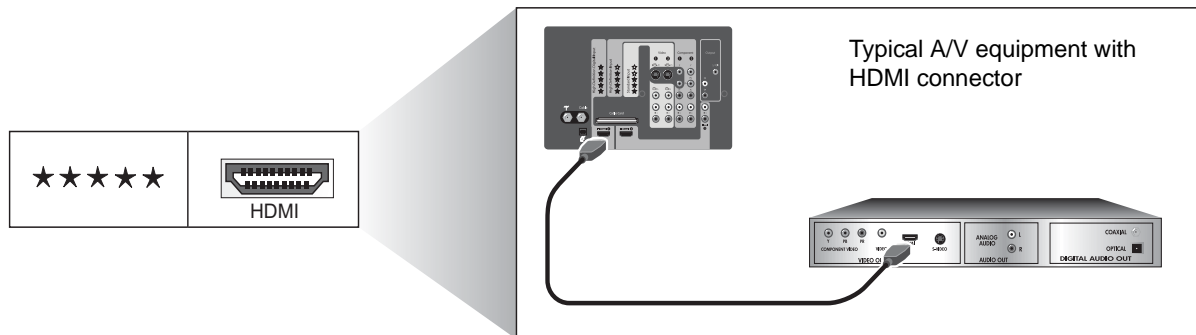
Choosing and Completing Your Video Connections

Cabling for HDMI, DVI-D, Component, S-Video, and Composite Connections

The following diagrams show how to connect video devices with different video outputs. (Connecting multiple units is covered later in the manual.) Use the highest-quality connection available on your device.

HDMI Connection

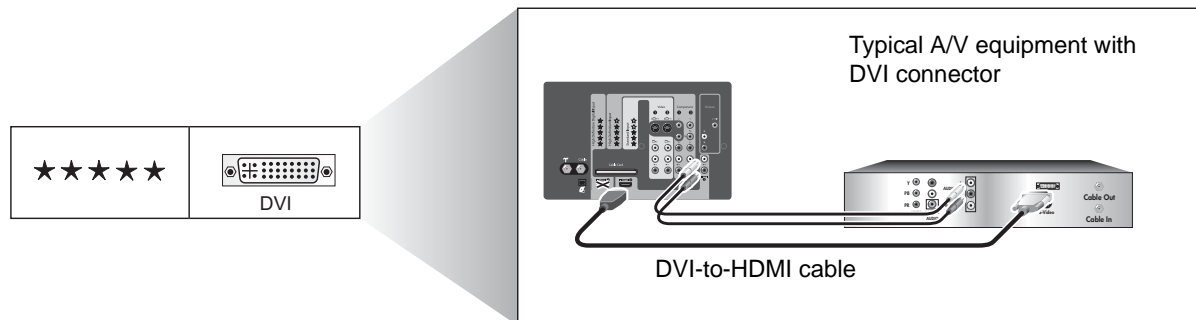
- HDMI cable



NOTE: You can connect the HDMI 1 and the HDMI 2 inputs on the television. The HDMI cable carries video and audio signals.

DVI-to-HDMI Connection

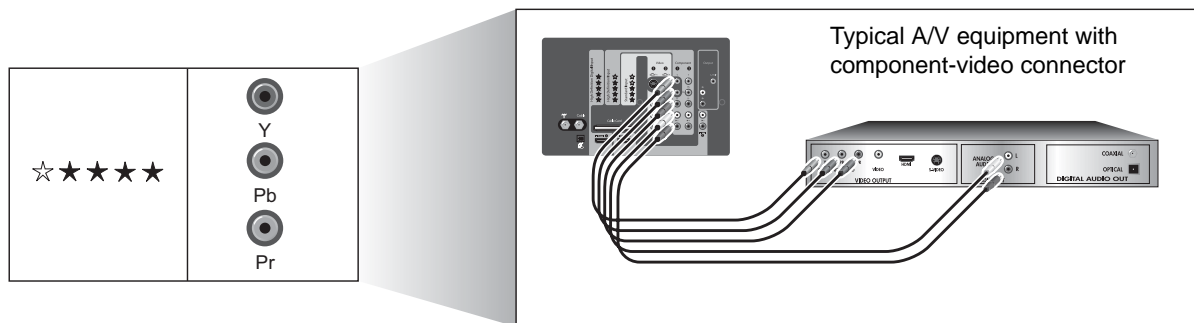
- DVI-to-HDMI cable (or HDMI-to-HDMI cable with DVI-to-HDMI adapter)
- Stereo RCA cable (two RCA connectors)



NOTE: If you are using the television speakers, connect the DVI device only to the HDMI 2 on the television. If you are connecting the audio directly to a sound system, you can connect DVI devices to the HDMI 1 and HDMI 2 inputs.

Component-Video (YPbPr) Connection

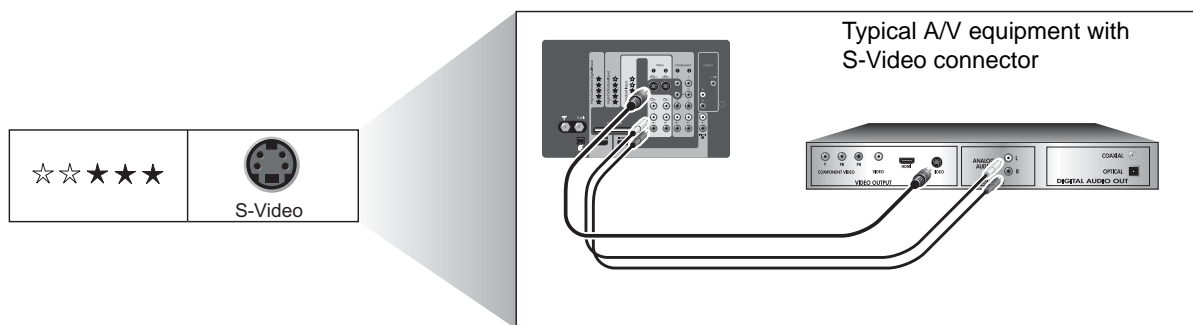
- Component-video cable (three RCA connectors)
- Stereo RCA cable (two RCA connectors)



NOTE: You can connect to the Component 1 and Component 2 inputs on the television.

S-Video Connection

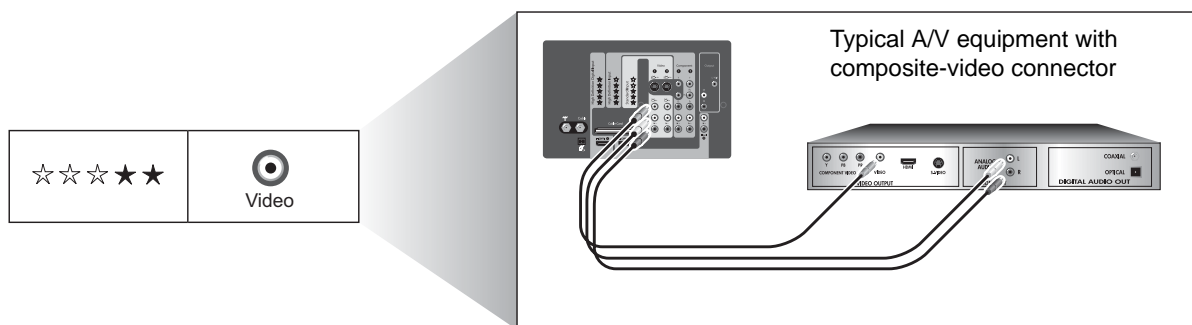
- S-video cable
- Stereo RCA cable (two RCA connectors)



NOTE: You can connect to the Video 1 and Video 2 inputs on the television. Two S-video or composite-video connections are supported for each of these two inputs.

Composite-Video Connection

- Composite-video/audio cable (three RCA) or separate video and audio cables



NOTE: You can connect to the Video 1, and Video 2 inputs on the television. Both the S-video and composite-video connections are supported for each of these two inputs.

Connecting Your Other Equipment

If you have a television antenna, cable service, or other equipment not shown above, use one of the basic connections listed in the following tables.

Basic antenna and cable connections

To connect this equipment...	See...
Antenna	"Antenna Only" on page 10
Antenna and cable	"Antenna and Cable" on page 10
Standard cable (no set-top box)	"Standard Cable" on page 11
Cable with set-top cable box	"Cable with Set-Top Cable Box" on page 11

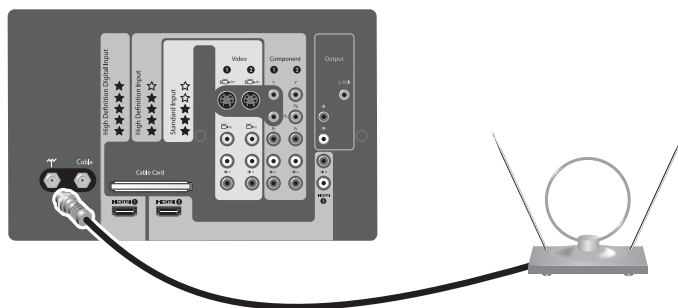
Other equipment connections

To connect this equipment...	See...
Satellite receiver (without VCR or DVR)	"Satellite Receiver" on page 12
Cable box and VCR/DVR	"Cable Box and VCR/DVR" on page 14
Satellite receiver and VCR/DVR	"Satellite Receiver and VCR/DVR" on page 15
DVD player or video gaming device	"DVD Player or Video Gaming Device" on page 16
Audio: Stereo sound system	"Audio: Stereo Sound System" on page 16
Audio: Surround sound or AV receiver	"Audio: Surround Sound or AV Receiver" on page 17
Computer	"Computer" on page 18

Antenna Only

If your antenna cable has a standard coaxial connector, connect the cable as shown.

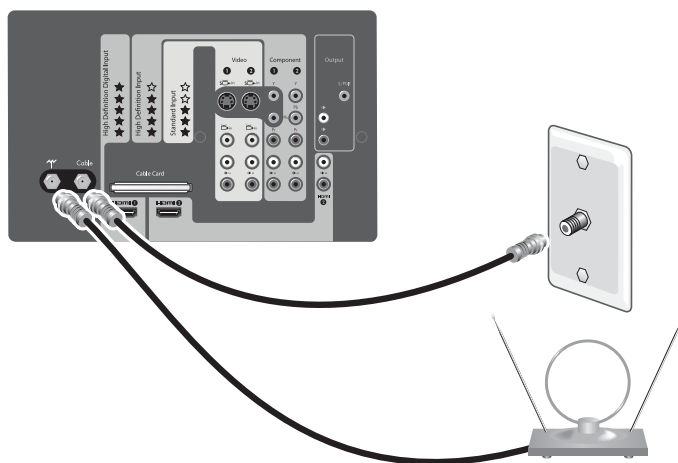
TIP: If your antenna has flat, twin-lead cable or other type of cable, connect the antenna cable to a coaxial adapter, then connect the adapter to the television antenna input.



To do this...	Do this...
Watch television received from an antenna	Press Source and select Antenna
Scan for available channels in your area	See "Finding Your Available Channels" on page 21
Connect additional equipment	See "Connecting Your Other Equipment" on page 9

Antenna and Cable

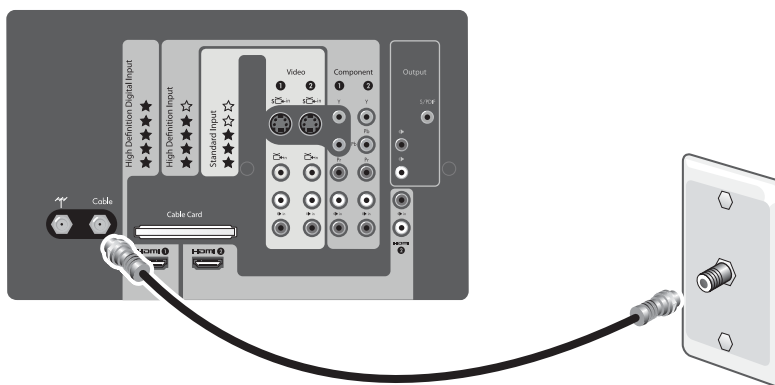
If you have an antenna and a cable connection, connect them as shown.



To do this...	Do this...
Watch cable channels	Press Source and select Cable
Scan for available channels	See "Finding Your Available Channels" on page 21
Connect additional equipment	See "Connecting Your Other Equipment" on page 9

Standard Cable

If your cable service does not require a set-top cable box (STB), connect the cable as shown. This setup enables you to watch unscrambled channels.

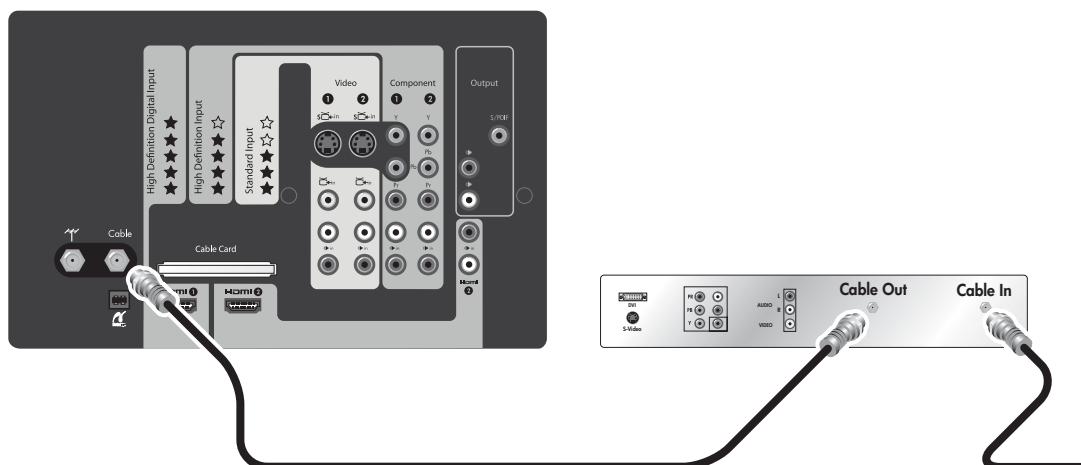


NOTE: Use this connection if you install a CableCARD module in your television. See "Installing a CableCARD Module" on page 19.

To do this...	Do this...
Watch cable channels	Press Source and select Cable
Scan for available channels	See "Finding Your Available Channels" on page 21
Connect additional equipment	See "Connecting Your Other Equipment" on page 9

Cable with Set-Top Cable Box

If your cable service requires a set-top cable box (STB) to view scrambled channels, connect the components as shown. This setup enables you to watch scrambled and unscrambled channels.



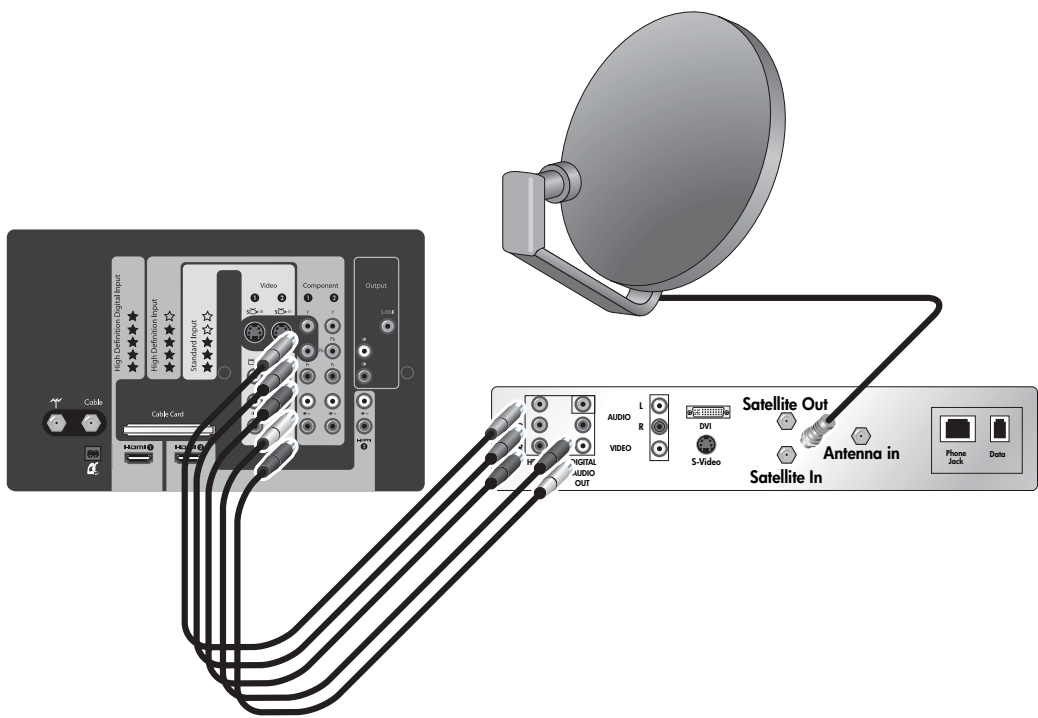
- If your cable box has different connectors than those shown, use the highest-quality video connection available. Observe the color-coding on all connectors.
- For digital cable, your set-top cable box (STB) might require a special splitter. Contact your cable provider for information. Or you can omit the splitter and omit the connection to the television cable input.

- If all cable channels are scrambled, connect the incoming cable directly to the cable box (omit the splitter and omit the connection to the television cable input).
- You can eliminate the cable box if your cable provider can install a CableCARD module in the television. See “Installing a CableCARD Module” on page 19.

To do this...	Do this...
Watch cable channels	Press Source and select Cable
Scan for available channels	See “Finding Your Available Channels” on page 21.
Connect additional equipment	“Connecting Your Other Equipment” on page 9

Satellite Receiver

If you have a satellite receiver (SAT) without a VCR or personal digital video recorder (DVR), you can connect it as shown.



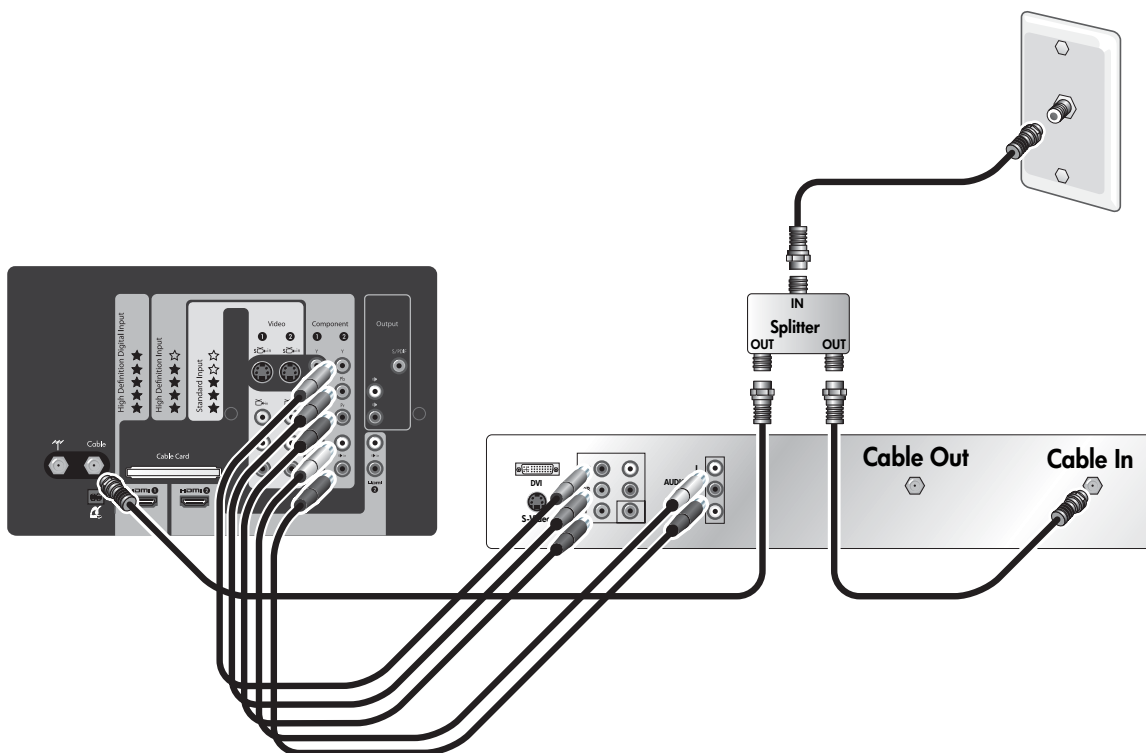
NOTE: If your device has different connectors than those shown, use the highest-quality video connection available. Observe the color-coding on all connectors.

To do this...	Do this...
Watch satellite channels	Press Source and select Component 1

Cable with Cable Box/DVR

If you have standard cable service and your cable box is equipped with a personal digital video recorder (DVR), connect your system as shown. This setup also enables you to record one channel while viewing another.

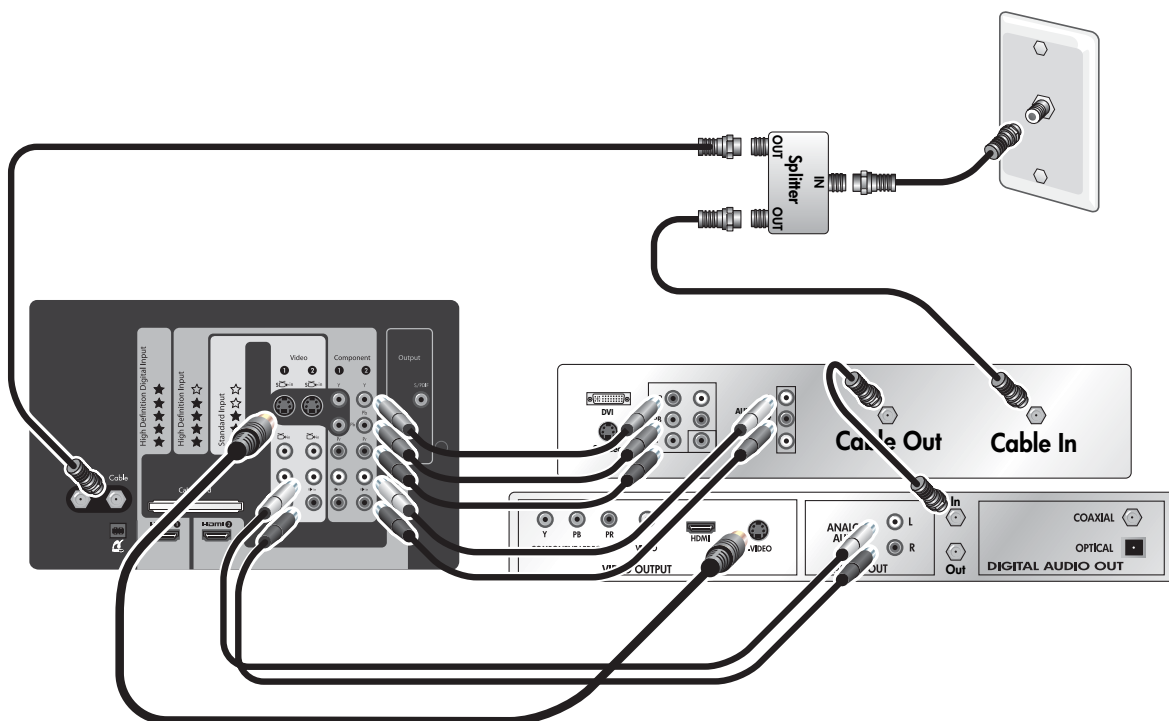
- If your cable box has different connectors than those shown, use the highest-quality video connection available. Observe the color-coding on all connectors.
- If all cable channels are scrambled and you have no CableCARD module installed, connect the incoming cable directly to the DVR cable box (omit the splitter and omit the connection to the television cable input).



To do this...	Do this...
Watch television channels	Press Source and select Cable
Watch VCR or DVR program	Press Source and select Component 2
Scan for available channels	See "Finding Your Available Channels" on page 21

Cable Box and VCR/DVR

If you have a set-top cable box (STB) and a VCR or personal digital video recorder (DVR), connect them as shown.



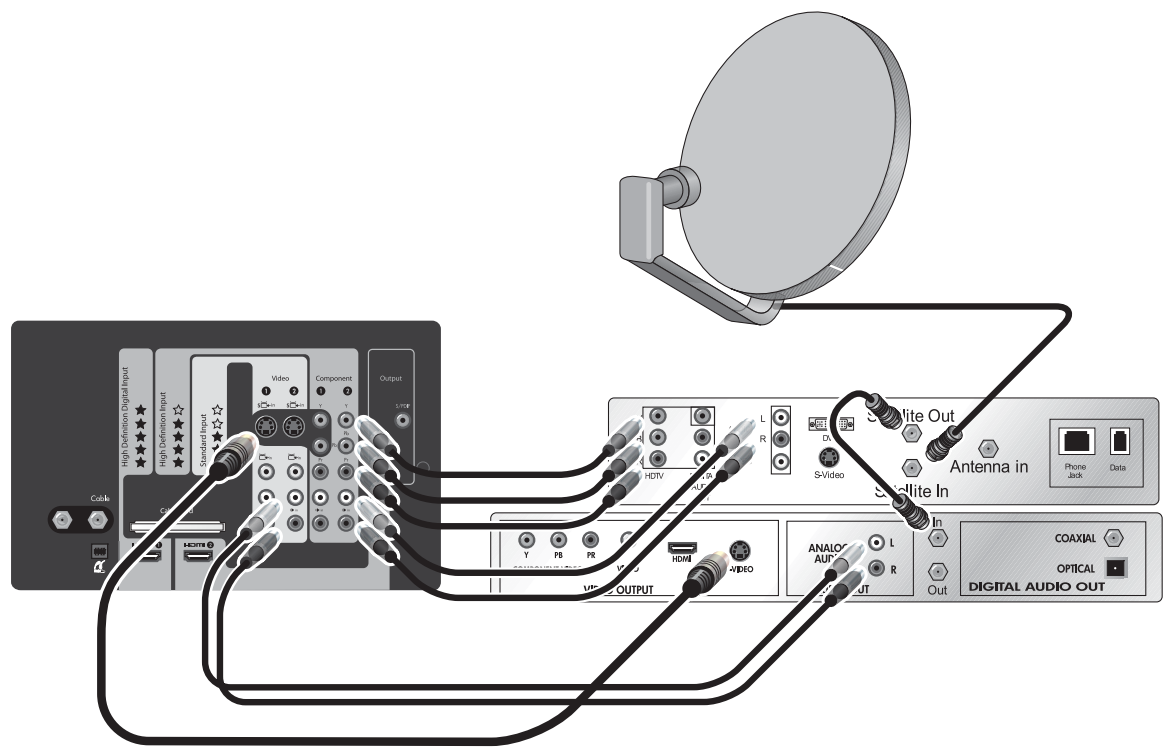
NOTE:

- If your devices have different connectors than those shown, use the highest-quality video connection available. Observe the color-coding on all connectors.
- For digital cable, your set-top cable box (STB) might require a special two-direction splitter. Contact your cable provider for information. Or you can omit the splitter and omit the connection to the television cable input.
- If all channels are scrambled, connect the incoming cable directly to the cable box (omit the splitter and omit the connection to the television cable input).
- You can eliminate the cable box if your cable provider can install a CableCARD module in the television. See "Installing a CableCARD Module" on page 19.

To do this...	Do this...
Watch cable-box channels	Press Source and select Component 2
Watch VCR or DVR programs	Press Source and select Video 1
Watch cable channels directly	Press Source and select Cable

Satellite Receiver and VCR/DVR

If you have a satellite receiver and a VCR or personal digital video recorder (DVR), connect them as shown.

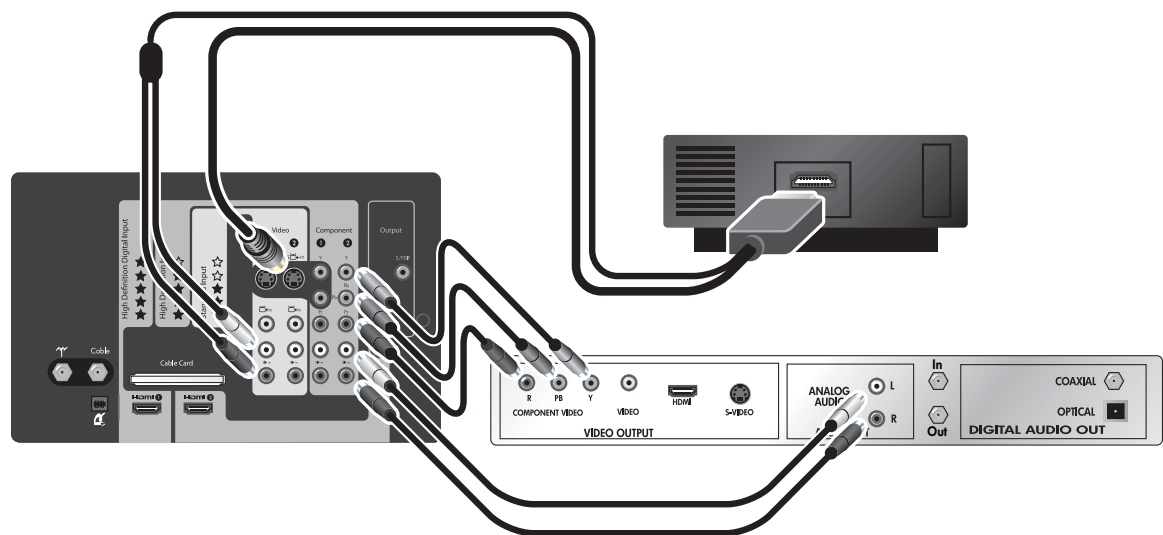


NOTE: If your devices have different connectors than those shown, use the highest-quality video connections available. Observe the color-coding on all connectors.

To do this...	Do this...
Watch satellite channels	Press Source and select Component 2
Watch VCR or DVR channels	Press Source and select Video 1

DVD Player or Video Gaming Device

If you have a DVD player, video gaming device, or other device with a standard video output, connect it as shown.

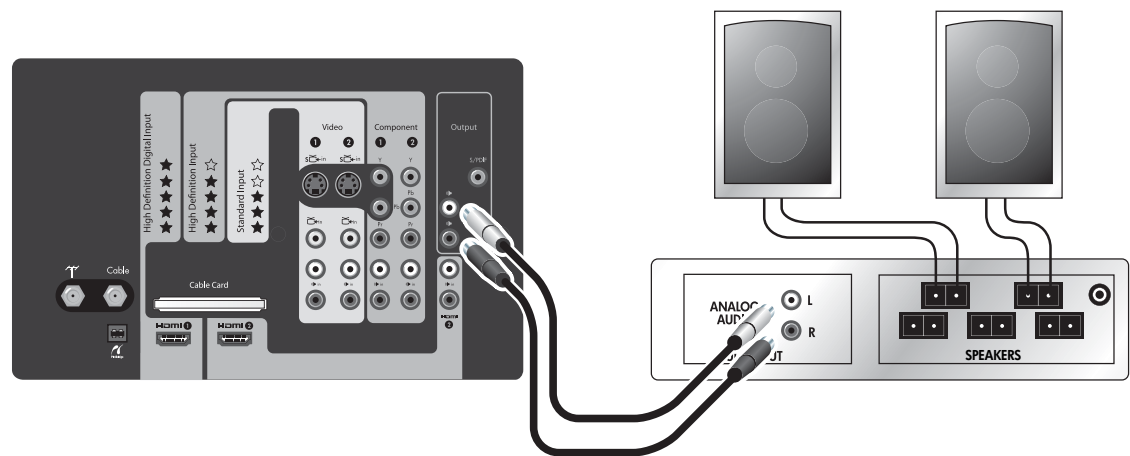


- If your devices have different connectors than those shown, use the highest-quality video connections available. Observe the color-coding on all connectors.

To do this...	Do this...
Watch video from the DVD player	Press Source and select Component 2
Watch video from the gaming device	Press Source and select Video 1

Audio: Stereo Sound System

If you have a stereo system, you can play the television sound through it. Connect the stereo to the television as shown.



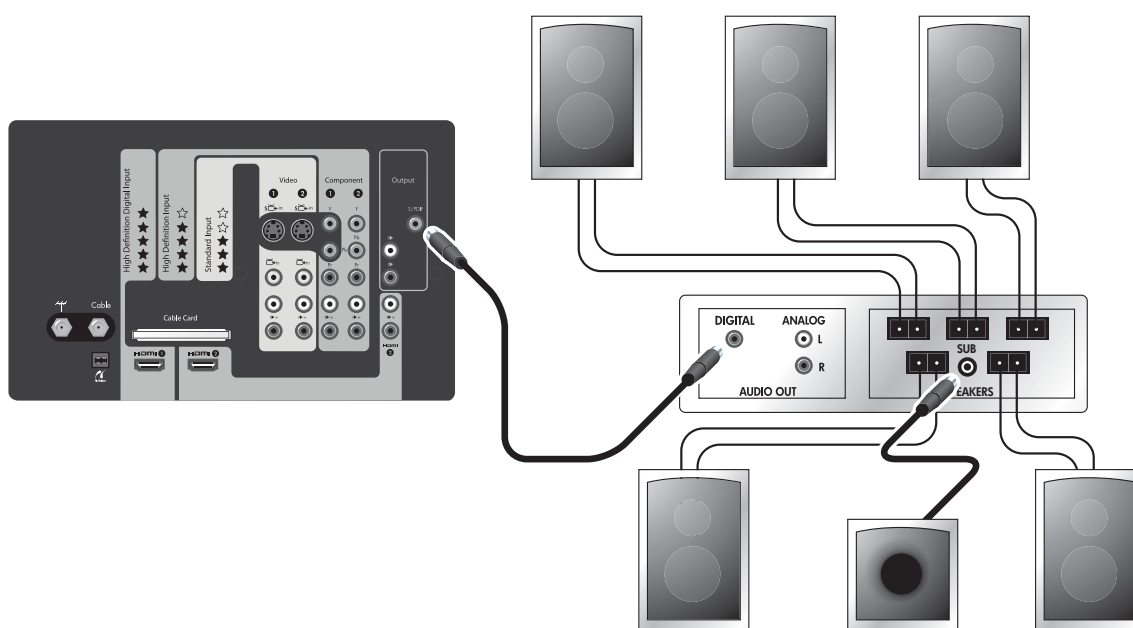
NOTE:

- Observe the color-coding on all connectors.
- You can disable the television speakers and listen to only the stereo speakers.
- The volume buttons on the television remote control normally adjust the television volume. This means you do not have to adjust the volume on the stereo system.

To do this...	Do this...
Change the volume	Press the volume buttons on the stereo system
Disable the television speakers	Press Menu and go to Sound > Internal Speakers

Audio: Surround Sound or AV Receiver

If you have a 5.1 surround sound system or audio-video receiver, you can connect its audio to your television as shown. You also can connect other equipment to the sound system.

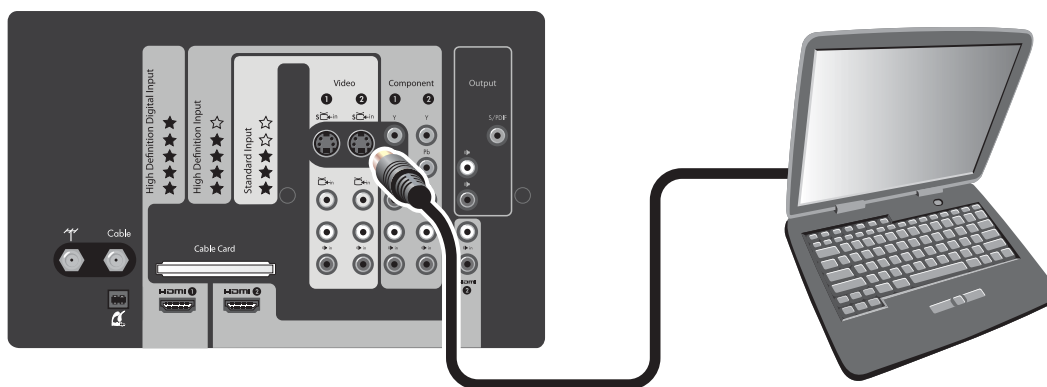


- The digital audio output on the television sends Dolby Digital surround sound only when you are viewing a source connected to an antenna, cable, or HDMI input, and only if the program contains surround sound. Otherwise, the digital audio output sends digital stereo sound.
- Other devices with digital audio outputs can be connected directly to the surround sound system so you can hear surround sound. You can omit the audio connections to the television for those devices.
- Devices with only stereo outputs can be connected directly to the surround sound system or to the television.
- If the AV receiver also supports multiple video connections, you can connect video outputs from other equipment to that device, and then connect the video output from the receiver to the television. Use the highest-quality video connections available.

To do this...	Do this...
Change the volume.	Press the volume button on the remote
Disable television speakers.	Press Menu and go to Sound > Internal Speakers

Computer

If the computer has an S-video output, you can connect it to the television as shown using either S-Video 1 or S-Video 2.



NOTE: If the computer display does not appear on the television, you might have to press a combination of keys on the computer to turn on the computer's VGA output. For instructions, refer to the user documentation provided with your computer.

To do this...	Do this...
View the computer display	Press Source and select Video 1 or Video 2

Using a CableCARD Module

What is a CableCARD Module?

The CableCARD feature built into your new HP HDTV provides a point of access for cable services in your area without the need for a set-top cable box (STB).

The CableCARD feature allows you to decrypt digital cable and use higher-quality components to handle scaling and display of cable channels.

By installing a CableCARD module in your television, you can enjoy features normally provided by a set-top cable box without connecting a cable box or operating another piece of equipment.

The availability, setup, and pricing of CableCARD service is determined by your local cable provider, not by HP. Contact your cable provider for information about this service in your area.

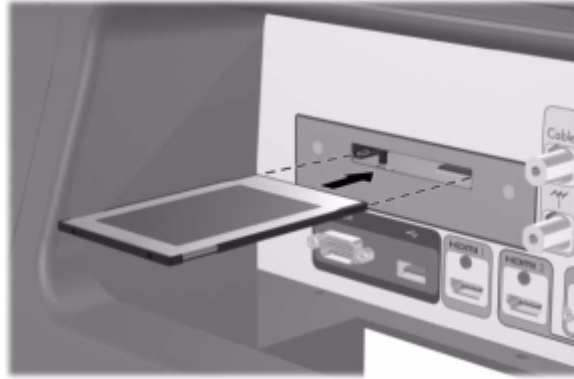
NOTE: Current CableCARD technology does not support interactive features such as video-on-demand that require two-way communication. Such features (if available in your area) require a set-top cable box. Contact your cable provider for information about advanced features they may offer in your area.

CAUTION: The CableCARD module is extremely sensitive to static electricity and can be permanently damaged by it. Handle the module only by the front plate. Before inserting the module into the television, discharge your body's static electricity by touching one of the video or audio connectors on the television panel.

Installing a CableCARD Module

You must obtain the CableCARD module from your local cable provider. After installing the card, follow any setup instructions provided with the card.

The following figure shows a typical CableCARD module, and is for illustration only.



1. Turn off the television. The CableCARD slot can be found in the back of the television.
2. Gently push the card into the slot until it stops. When fully inserted, the card will stick out slightly. Do not attempt to force the card into the television!
3. Press **Menu**. Press the left or right arrow buttons to go to **Source > Cable card**, and press OK. Your cable provider uses the information in the CableCARD screens to activate and configure the CableCARD service.
4. To remove the CableCARD module, first turn off the television, and then pull the card out of the slot. The CableCARD functions are then removed automatically.

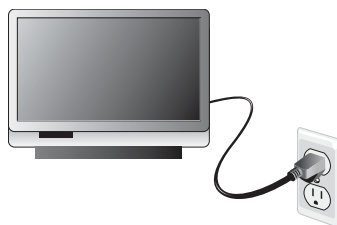
Turning the Television On and Off

Plugging in the Power Cord

- Plug the power cord into a polarized outlet.

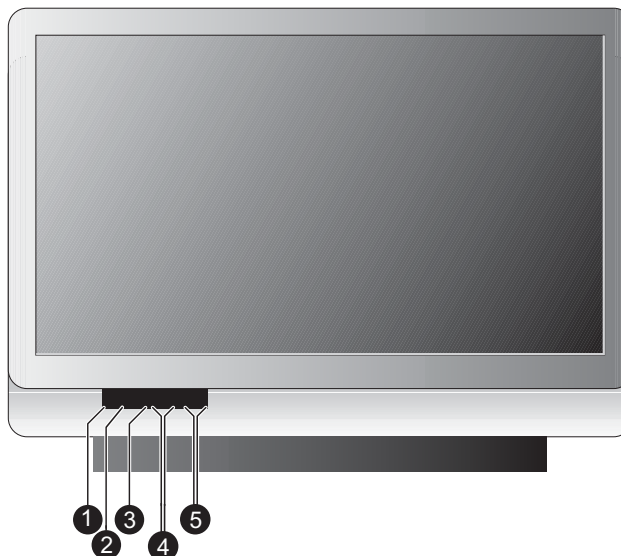


CAUTION: Do not defeat the safety purpose of the polarized plug attached to the television. A polarized plug has two blades with one wider than the other. The wide blade is provided for your safety. If the polarized plug does not fit into your existing outlet, contact a qualified electrician to replace the obsolete outlet with a polarized outlet.



Turning on the Television

- Press the power button on the front of the television or on the remote control.



	Item	Function
1	Power	Turns the television on and off.
2	Menu	Opens the main menu.
3	OK	Selects an item.
4	Volume	Increases or decreases the volume. Moves up and down through the on-screen menus.
5	Arrows	Changes the channel. Moves left and right through the on-screen menus.

The television might take a minute or so to warm up and display a bright picture.

NOTE: It is normal for parts of the television and the air coming out of the vents to be very warm. If the television starts to overheat, the television will shut down.

Turning Off the Television

- Press the power button on the television or on the remote control.

The internal fans continue to run for a short time during the cool-down period. Even though the television is off, it continues to use a small amount of power.

If you turn on the television again during the cool-down period, the television might not turn on as quickly as usual.

CAUTION:

- Do not disconnect power until the television has cooled and the fan stops running—up to three minutes after turning it off. Otherwise, you might shorten the life of the lamp.
- If power is removed from the television, wait more than two minutes before attempting to turn on the television. Otherwise, you might shorten the life of the lamp.

Completing the Basic Setup

Finding Your Available Channels

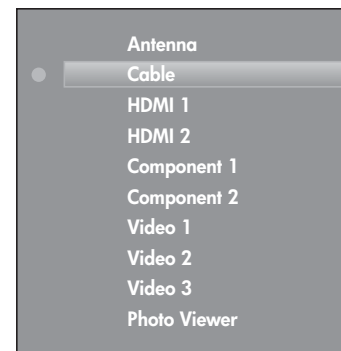
After you connect your cable and/or antenna, you are ready to find the available channels. These are the channels you can receive on the television's tuner using the **Ch+** and **Ch-** buttons.

TIP: If you have a cable box or satellite receiver, you must set up that device before you can view channels from that source. The television tuner receives channels only from the antenna and cable inputs.

NOTE: The following steps can take from one minute to more than 30 minutes, depending on the available channels in your area.

If you have an antenna connected to the antenna input:

1. On the remote control, press **Source**. Press the arrow buttons to select **Antenna** and press OK.
2. Press **Menu**. Press the left or right arrow buttons to select the **Source** menu.
3. Press the up or down arrow buttons to select **Channel setup** and press OK. Press the up or down arrow to select **Auto search**. Press OK.
4. Wait for the television to scan all available channels.



If you have cable service connected to the cable input:

1. On the remote control, press **Source**. Press the arrow buttons to select **Cable** and press OK.
2. Press **Menu**. Press the left or right arrow buttons to select the **Source** menu.
3. Press the up or down arrow buttons to select **Channel setup** and press OK. Press the up or down arrow to select **Auto search**. Press OK.
4. Wait for the television to scan all available channels.

After all channels are found, you can manually add or remove channels from the list. See “Adding or Deleting a Channel” on page 36.

Setting the Time and Date

NOTE: The time and date will only appear when the **Guide** button is pressed.

1. Press **Menu**. Press the left and right arrow buttons to select the **Source** menu. Press OK.
 2. Press the up and down arrows to select **Time**. Press OK.
 3. Use the left or right arrows to select **Clock** and press OK. Enter the following settings using the arrow buttons:
 - **Time zone**
 - **Daylight savings** (for most areas, **Auto** is the preferred setting)
-

TIP: The television automatically sets the date and time. If the television loses power, please note that it can take an hour or more to discover and reestablish the required information.

2 Using the Photo Viewer

About Picture Viewer

Using Photo Viewer you can view your digital pictures on your HD television. You can view individual pictures, rotate pictures, view slideshows of your pictures, and even print your pictures through the ease of the television's remote control.

Inserting Your Memory Card Into the Television

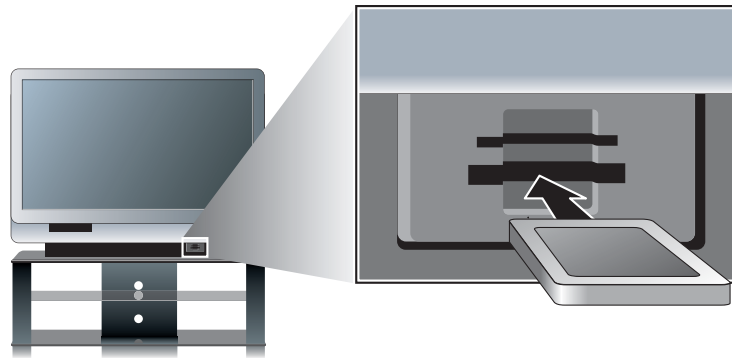
Before you can view your pictures, insert your memory card into the television's card reader slot.

1. Remove the memory card from your camera. For instructions, refer to the camera manufacturer's documentation.
2. Insert your card into the card reader slot, located at the bottom right of the front of the television.
 - If you have a compact flash card (a compact flash card has a larger form size), insert it into the bottom slot. Press the card firmly into place.
 - For all other card types, use the top slot. This slot fits many sizes of memory cards, and may be wider than your memory card. Insert your card into the center of the slot. Press the card firmly into place.

Most memory cards have arrows that indicate which way to insert the card. Make sure the arrow is on the top of the card and pointing into the card reader slot.



CAUTION: Be sure not to insert more than one memory card into the television at one time. If multiple cards are in the television at the same time, the data on the memory cards may be corrupted and data could be permanently lost.



3. The television should automatically begin reading the card. If it does not, press **Source**. Use the up and down arrow buttons to select **Photo Viewer**, then press OK.

Removing a Memory Card

- To remove a memory card, gently pull the card toward you and out of the television.

Browsing Pictures

This feature allows you to view and search through all the photos on your memory card.

1. On the remote control, press **Menu**. Use the left and right arrow buttons to select **Browse**, then press OK.
2. The photos are then displayed as thumbnails. To view a photo full-screen, use the left and right arrow buttons to highlight the photo, then press OK. To return to thumbnail view, press OK.

NOTE:

- You can rotate a picture by pressing the red button.
 - You can use **Ch+** and **Ch-** to page through the thumbnails.
 - As you browse through your pictures, you can tag specific pictures for printing or viewing in a slideshow. For more information, refer to "Tagging and Untagging Pictures" on page 24.
-

Tagging and Untagging Pictures

Tagging pictures allows you to mark specific photos for viewing in a slideshow.

1. On the remote control, press **Menu**. Use the left and right arrow buttons to select **Browse**, then press OK.
2. To tag a photo:
 - Use the left and right arrow buttons to select a photo, then press the green button. Tagged photos are marked with a check at the bottom.

To untag a photo:

- Highlight the photo and press the green button. To untag all photos, press the yellow button.

Viewing a Slideshow

A slideshow is a sequential, full-screen view of all your pictures. The photos automatically advance at specified time intervals.

1. Press **Menu**. Use the left and right arrow buttons to select **Slideshow**, then press OK.
2. If no photos are tagged, the slideshow begins. If some photos are tagged, use the up and down arrow buttons to select whether to view all photos or just the tagged photos, then press OK.

NOTE:

- To manually go forward or backwards in the slideshow, press the left and right arrow buttons.
 - To pause a slideshow, press OK or **Info**.
 - To queue photos for printing during a slideshow, press OK or **Info** to pause the slideshow. Then, do one of the following:
 - To print one copy of the photo, press the yellow button.
 - To print more than one copy of a photo, use the number pad to specify the number of copies to print. The number of copies will be indicated near the picture. When you are finished, press OK or **Info** to return to the slideshow.
 - To adjust the time delay on the slideshow or have the slideshow automatically repeat, refer to "Adjusting Photo Viewer Settings" on page 26.
-

Printing Pictures

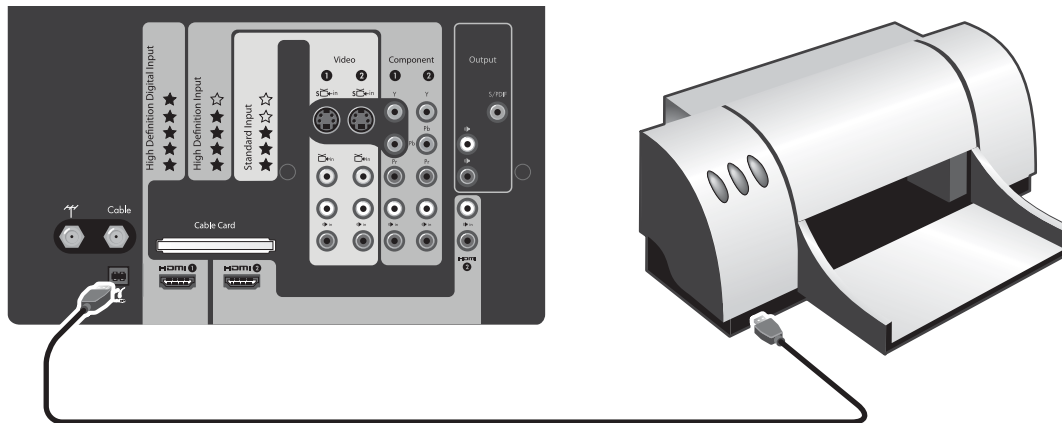
Your printer must use PictBridge technology. If it does not, you will not be able to print photos through the television.

NOTE: When printing photos, note that your printer may not support all of the available print options. When you access the Print screen, only the available options will be shown.

Connecting the Printer

To print photos, you must first connect your printer to the television. The television is already printer-ready. Once connection is established the on-screen display will provide step-by-step instructions.

1. Connect the USB cable from the printer to the PictBridge slot on the back of the television.
2. Follow the on-screen instructions.



Printing all pictures

To print all the pictures on the memory card:

1. Insert the memory card into the television.
2. Connect the printer to the television. Turn on the printer.
3. On the remote control, press **Menu**. Use the left and right arrow buttons to select **Print**. Press OK.
4. Use the up and down arrow buttons to select the settings you want to change. When you are done, use the up and down arrow buttons to select **Print Now** and press OK.

Printing one picture or multiple copies of one picture

To print one picture or multiple copies of one picture:

1. Insert the memory card into the television.
2. Connect the printer to the television. Turn on the printer.
3. On the remote control, press **Menu**. Use the arrow buttons to select **Photo Options**, and press OK.
4. Use the left and right arrow buttons to review your pictures.
5. To queue a photo for printing, press the yellow button (for 1 copy) or a numbered button (for multiple copies). The number of copies will be indicated near the picture.
6. Use the arrow buttons to select **Print photos**. Press OK.
7. On the **Print** screen, use the arrow buttons to select the desired print options:
 - **Paper size** — Selects the paper size that the photos will be printed on.
 - **Print layout** — Selects the layout of the printer photos.
 - **Print photo filename** — Adds or removes the filename of the photo from the printed output.
 - **Print photo date** — Adds or removes the photo date from the printed output.
 - **Print pictures** — Prints the pictures. Select **Queued**.
8. When you are finished, use the up and down arrow buttons to select **Print Now** and press OK.

Printing all tagged photos

To print all tagged photos:

1. Insert the memory card into the television.
2. Connect the printer to the television. Turn on the printer.
3. Tag the photo(s) you want to print. Refer to "Tagging and Untagging Pictures" on page 24.
4. On the remote control, press **Menu**. Use the arrow buttons to select **Photo Options** and press OK.
5. Use the up and down arrow buttons to select **Add tagged photos to print queue** and press OK.
6. Use the arrow buttons to select **Print photos**. Press OK.
7. On the **Print** screen, use the arrow buttons to select the desired print options:
 - **Paper size** — Selects the paper size that the photos will be printed on.
 - **Print layout** — Selects the layout of the printer photos.
 - **Print photo filename** — Adds or removes the filename of the photo from the printed output.
 - **Print photo date** — Adds or removes the photo date from the printed output.
 - **Print pictures** — Prints the pictures. Select **Queued**.
8. When you are finished, use the up and down arrow buttons to select **Print Now** and press OK.

Clearing the print queue

- After you print, you will be prompted if you want to clear the print queue. When prompted, use the arrow buttons to select **Yes** and press OK.
—or—
- Use the arrow buttons to select **Photo Options** and press OK. Use the up and down arrow buttons to select **Clear print queue** and press OK.

Adjusting Photo Viewer Settings

1. Press **Menu**. Use the arrow buttons to go to the **Settings** menu. Press OK.
2. On the Settings screen, use the up and down arrow buttons to select the setting and then use the right and left arrow to change the setting. The default settings are the preferred settings. Note that your printer may not support all options. The settings are as follows:

Setting	Description
Slideshow timing	Changes the time each photo is displayed during a slideshow.
Slideshow repeat?	Specifies whether or not slideshow repeats when it is finished.
Paper size	Changes the paper size used by the printer.
Print layout	Changes the layout of the printer photos.
Print photo filename	Adds or removes the filename from the printed photos.
Print photo date	Adds or removes the date the photo was taken to the printed photos.
Date format	Adjusts how the date is displayed.
Time format	Adjusts how the time is displayed.

3. When you are finished, use the arrow buttons to select **DONE** and press OK.

Troubleshooting Problems

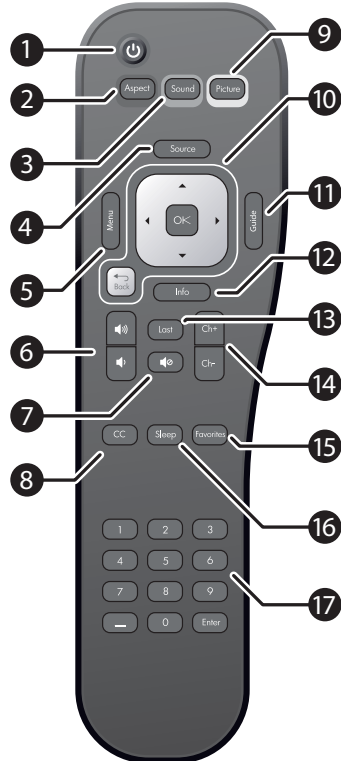
Problem	
The printer outputs a blank sheet of paper.	Possible Cause: There is a mismatch between the paper size selected and the paper in the printer. Solution: Restart the print job and specify a paper size that matches the paper loaded in the printer.
	Possible Cause: You have selected a print size larger than the current paper size. Solution: Restart the print job and specify a print size that can fit on the paper loaded in the printer.
The television reports 'No printer available' when you initiate a print job.	Possible Cause: A printer is not connected to the television. Solution: Connect a printer to the television and try again.
	Possible Cause: A printer is connected, but the printer is not powered on. Solution: Power on the printer and try again.
	Possible Cause: There was a communications problem between the television and the printer. Solution: Disconnect the printer from the television and wait 15 seconds. Then reconnect the printer to the television. Try printing again.
No images are shown when a memory card has been inserted.	Possible Cause: The memory card has not been fully inserted into the card reader slot. Solution: Verify that the card is completely inserted in the card reader slot. Pull out the memory card and insert it again.
Some thumbnail images are missing when you print an index page.	Possible Cause: You have used an external image manipulation program to adjust some of the images and the image manipulation tool created a non-standard embedded thumbnail, which could not be handled by the printer. Solution: Print an index page using the original, un-altered images.
Some of the images on the memory card show up as 'invalid'.	Possible Cause: The images are not baseline encoded, RGB JPEG images. Solution: None. The television only supports JPEG images which use the RGB colorspace and baseline encoding.
You rotate an image and then remove the memory card. The next time the card is inserted, the rotation information has been lost.	Possible Cause: The memory card was write-protected, so the rotation information could not be saved. Solution: On the memory card, change the write-protection feature so that you can write to the memory card and try again.
	Possible Cause: The memory card is full, so there is no room to save the rotation information. (If the memory card is full, a card warning icon appears on the screen.) Solution: Using the camera, remove unwanted pictures, freeing up space on the memory card.

Problem	
<p>You mark images for printing and remove the memory card. The next time the card is inserted, the printing information has been lost.</p>	<p>Possible Cause: The memory card was write-protected, so the rotation information could not be saved.</p> <p>Solution: On the memory card, change the write-protection feature so that you can write to the camera card and try again.</p>
	<p>Possible Cause: The memory card is full, so there is no room to save the rotation information. (If the memory card is full, a card warning icon appears on the screen.)</p> <p>Solution: Using the camera, remove unwanted pictures, freeing up space on the memory card.</p>
<p>A really large image is shown as an 'invalid' image.</p>	<p>Possible Causes: The image is too wide. Photo Viewer only supports images up to 10,000 pixels wide</p> <p>Solution: Reduce the width of the image using your camera or an editing program and try again.</p>

3 Watching Television

Overview of the Remote Control

Use the remote control to control all aspects of operating the television. On-screen menus will guide you through the controls and features. When using the remote control, point it at the panel on the front of the television.



Item	Function
1 Power	Turns the television on and off.
2 Aspect (red)	Changes the overall size and stretching of the picture.
3 Sound (green)	Changes to a different combination of sound options.
4 Source	Selects an input source: Cable, Antenna, HDMI1, HDMI2, Component 1, Component2, Video 1, Video 2, Video 3, or Picture Viewer.
5 Menu	Opens the main menu.
6 Volume	Increases or decreases the volume.
7 Mute	Turns off (mutes) the sound.
8 CC	Turns closed captioning on and off, and selects the mode.
9 Picture (yellow)	Changes your picture and color settings: Normal, Movie, Vivid, Studio.
10 Arrow buttons, OK, and back	Moves through the on-screen menus to make selections.
11 Guide	Shows the Electronic Program Guide (when available).
12 Info	Shows channel or source information.
13 Last	Shows the last channel previously displayed.
14 Channel	Changes the displayed channel.
15 Favorites	Shows the next of your favorite cable channels.
16 Sleep	Changes the delayed shutoff timing.
17 Keypad	Enters numerical values for channels or settings.

Using Your Remote Control

NOTE: Before using the remote control, install two AAA batteries. See "Installing Batteries in the Remote Control" on page 3.

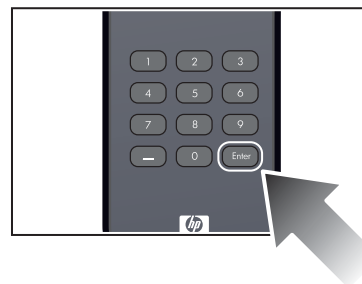
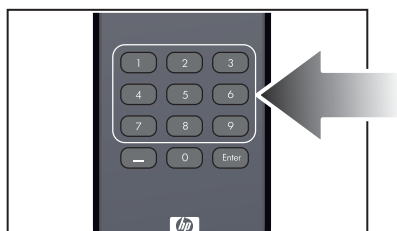
To do this...	Do this...
Turn the television on or off	Press the power button on the remote control or the television
Change the channel	Press Ch+ or Ch-
Adjust the volume	Press the volume button up or down
View a different source	Press Source and then use the up and down arrow buttons
Adjust the picture	Press Picture

Changing the Channel

- To browse your available channels, press **Ch+** or **Ch-**.



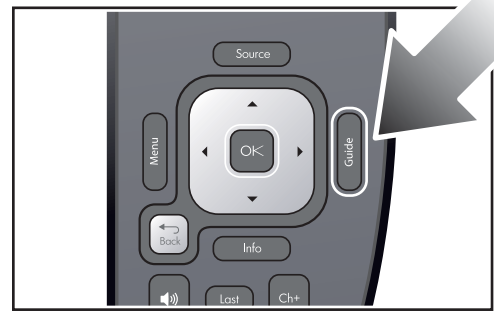
- To select a standard channel, press 0 thru 9, and then **Enter**. You can enter channels using 1, 2, or 3 digits (12, 012, etc.).



- To select digital channels, enter all three digits. Press 0 thru 9, -, 0 thru 9, and then **Enter**. The sub-channel follows the hyphen (-).
- To go to the last channel displayed, press **Last**.
- To select your favorite channels, press **Favorites**.



- To view all available channels, Press **Guide**, then **Ch+** or **Ch-** and OK.



Adjusting the Volume

NOTE: The volume buttons on the remote control always change the volume of the television speakers. They do not change the volume of any external sound system.



- Press the up or down volume button.
- To temporarily mute the sound, press the mute button.

Viewing Closed Captions

Your new television enables you to view closed captioning for certain shows and movies received on the television antenna input and cable input.

NOTE: If you have a set-top cable box (STB) or satellite receiver not connected to the television's antenna input or cable input, you cannot use the television to control closed captioning for this source. You must use whatever options are provided by the cable or satellite equipment.



Press **CC** on the remote control one or more times to cycle through these options:

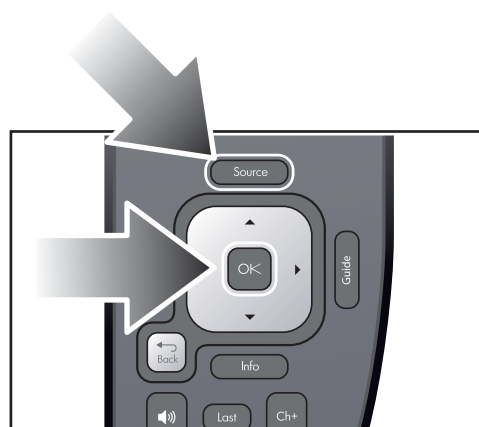
- **Closed Caption mode On**
- **Closed Caption mode On mute**
- **Closed Caption mode Off**

Depending on the program, you might be able to customize the content and appearance of the captions.

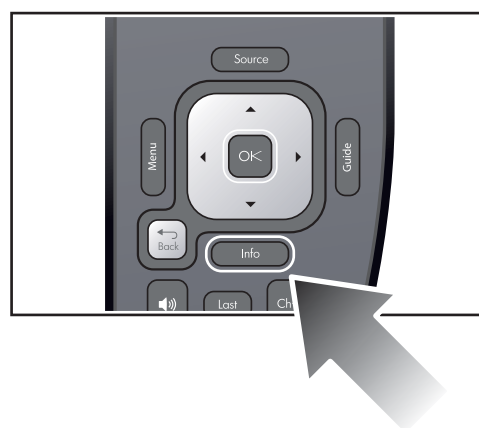
1. Press **Menu**. Use the arrow buttons to select the **Settings** menu and press OK.
2. Use the arrow buttons to select **Closed Caption** and press OK.

Selecting a Video Source

- To choose from a list of sources, press **Source**, use the arrows to select the source, then press OK.



- To display information about the current source, press **Info**.



Using Dual Picture Mode

NOTE: To use dual picture mode, one of the pictures must be from the antenna or cable source. However, you cannot view the antenna and cable sources at the same time.

- Press **Menu**. Use the arrow buttons to select the **Source** menu. Use the arrow buttons to select **Dual picture** and press OK.
- Use the arrow buttons to select **Dual mode**. Then use the right arrow to select **PIP** or **Side-by-side**.
- Press the down arrow, then use the right arrow to select the source. If you are using the PIP mode, use the arrow buttons to specify the size and layout for the second picture.

To do this...	Do this...
Find the active picture	Use the left and right arrows on the remote control when no border is visible
Change the size of the active picture	Use the up and down arrows on the remote control
Move the border to the other picture and play its sound	Use the left and right arrows on the remote control
Move an overlapping picture (PIP)	Press Menu , then go to Source > Dual picture > Layout
Show only the active picture (end two pictures)	Press Menu , then go to Source > Dual picture > Dual mode

Applying Parental Controls

The television enables you to control the display of certain types of shows, movies, and channels, such as programs received on the antenna input and cable input.

NOTE: If you have a set-top cable box (STB) or satellite receiver not connected to the television's antenna input or cable input, you cannot use the television's controls to block programs for this source. You must use whatever controls are provided by the cable or satellite equipment.

Setting Permission Levels

By using the standard ratings associated with many television shows and movies, the television can block the types of content you do not want to view. By setting a lock at a certain television or movie rating, you block shows or movies that exceed that rating.

TIP: If you want to watch a blocked program, you can temporarily suspend the parental controls if you know the password. See "Temporarily Suspending Controls" on page 33.

Setting a Simple Lock

The simplest way to block unwanted shows and movies is to choose one of the predefined rating levels.

1. Press **Menu**. Use the arrow buttons to select the **Settings** menu and press OK.
2. Use the arrow buttons to select **Lock**, and press OK.
3. If no password is set: when prompted, press a sequence of four 0 through 9 buttons to create a new password. When prompted, press the same buttons again.
If a password is set: when prompted, press the buttons for your password.
4. Use the arrow buttons and OK to select the ratings you want to block.

NOTE: Many news, sports, and general interest programs are not rated.

Temporarily Suspending Controls

If you want to watch a show that would be blocked by your normal control settings, you can temporarily turn off the controls.

1. Press **Menu**. Use the arrow buttons to select the **Settings** menu and press OK.
2. Use the arrow buttons to select **Lock**, and press OK.
3. When prompted, enter your password using the remote control.
4. Use the arrow buttons to select **Suspend locks?** and set this setting to **Yes**. This will suspend the locks until the television is turned off.

Changing Your Password

The password prevents other viewers from watching programs or changing the parental controls without permission.

1. Press **Menu**. Use the arrow buttons to select the **Settings** menu and press OK.
2. Use the arrow buttons to select **Lock**, and press OK.
3. When prompted, enter your password using the remote control.
4. Use the arrow buttons to select **Set password**. Press a sequence of four 0 through 9 buttons for the new password.

TIP: To cancel parental control, press **Menu**. Select **Setup > Lock**. When prompted, enter your password using the remote control. Use the arrow buttons and OK to de-select all of the blocked ratings.

Rating Systems

NOTE: A large rating icon appears in the upper left-hand corner of the television screen for the first 15 seconds of every rated program of 30 minutes or less. For every rated program longer than an hour, a rating icon appears in the upper left-hand corner of the screen at the beginning of each half hour. A rating icon is also displayed after every commercial break for all rated programs.

Rating	Description
USA television age ratings	
TV-Y	All children
TV-Y7	Directed to children age 7 and above
TV-G	General audience
TV-PG	Parental guidance suggested
TV-14	Parents strongly cautioned
TV-MA	Mature audiences only
USA television content ratings	
FV	Fantasy or cartoon violence
V	Violence
L	Coarse or crude indecent language
S	Sexual situations
D	Suggestive or sexual dialog
USA movie ratings	
G	General audience (all ages)
PG	Parental guidance suggested (some material may not be suitable for children)
PG-13	Parents strongly cautioned (some material may be inappropriate for children under age 13)
R	Restricted (parental guidance suggested for children under age 17)
NC-17	No one age 17 or under allowed
X	No one age 17 or under allowed
Canada English ratings	
E	Exempt
C	Children (all ages)
C8	Children age 8 and above
G	General (all audiences)
PG	Parental guidance (some material may not be suitable for children)
14+	Viewers age 14 and above
18+	Adult (viewers age 18 and above)
Canada French ratings	
E	Exempt
G	General
8+	Not for children under age 8
13+	Not for children under age 13
16+	Not for viewers under age 16
18+	Adult (viewers age 18 and above)

4 Adjusting the Television

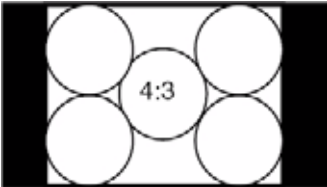
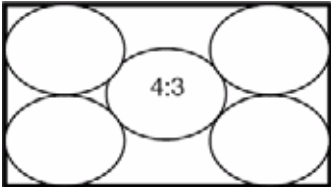
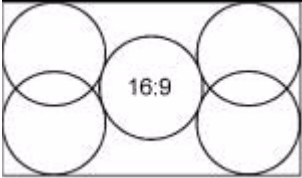
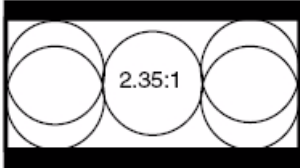
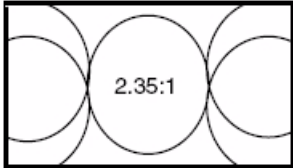
Adjusting the Size (Aspect) of the Picture

Video images come in several different sizes, depending on the video content and the source device. If a picture does not fit the shape of your television screen, you have several choices:

- shrink the picture to fit the screen with black bars filling the unused space
- zoom the picture to fill the screen
- stretch the picture to fill the screen.

Press **Aspect** one or more times to find the size and shape you like best. The options may vary, depending on the input resolution. For some options, some parts of the picture might be off the screen or stretched.

TIP: The Normal setting is the only setting that will always display the picture with no distortion.

Type of picture	Resulting views
Normal <ul style="list-style-type: none">• Best fit (side bars fill screen)	 
Wide-Screen Picture <ul style="list-style-type: none">• Best fit (fills screen)	
Zoom <ul style="list-style-type: none">• Best fit (top and bottom bars fill screen)	 

TIP: Set the video output from the source device to a 16:9 aspect ratio (wide-screen picture) whenever possible. Refer to the instructions for the video device. This provides maximum compatibility between the device and the television.

Adjusting the Picture for Best Color

You can fine-tune the picture settings on your television to get the best color and image quality. You can perform these steps for each input port that you use. Do them in the order shown. For some input ports, some of these settings might not be available, and you should skip these adjustments.

1. Press the **Picture** button and select the picture mode you want to use for the current source. If you are satisfied with the color, stop here.
2. Press **Menu**. Use the arrow buttons to select the **Picture** menu and press OK.

3. Go to the **Brightness** menu. Adjust to the highest setting that still gives the darkest black for black areas. You can view black objects or shadowed areas.
4. Go to **Contrast**. Adjust to the highest setting that does not wash out fine detail in bright areas. You can view bright clouds or textured white areas.
5. Go to **Advanced color > Gamma**. Adjust to the setting that gives the best overall midrange brightness. This should have minimal effect on blacks and whites.
6. Go to **Advanced color > Color temperature**. Adjust to the setting where whites and colors look best.
7. Go to **Advanced color > Vibrant Black** and adjust the setting (LED television only). The Vibrant Black™ setting enhances the contrast in dark images.
8. Go to **Advanced color > Brightness boost** and adjust the setting (Lamp television only). Off enables the most natural colors. On enables the brightest picture.
9. Go to **Noise reduction**. Adjust the setting to create the best display.
10. Go to **Color saturation**. Adjust to the setting where colors look most natural.
11. Go to **Advanced color > Tint**. Adjust to the setting where colors look most natural.
12. Repeat all steps if necessary.

TIP: To reset the **Picture** menu, press **Menu**. Use the arrow buttons to select the **Settings** menu and press OK. Go to **Picture > Reset**, press OK, and select **Yes**.

Adjusting Other Picture Settings

The on-screen menu provides many settings that enable you to fine-tune the picture.

1. Press **Menu**. Use the arrow buttons to select the **Advanced Picture** menu and press OK.
2. Change the picture settings as needed.

Adjusting Sound Settings

To get descriptions for all available sound adjustments, see “Source Menu” on page 38.

To do this...	Do this...
Change the volume	Press the volume buttons.
Adjust the sound quality	Press Menu . Use the arrow buttons to select the Sound menu and press OK. Use the right arrow to enter the Advanced sound menu. Use the remote to modify these settings.
Turn off the speakers	Press Menu . Use the arrow buttons to select the Sound menu and press OK. Go to Sound > Internal speakers .

Customizing Your Channels and Sources

Adding or Deleting a Channel

You can manually add or delete channels in the list of channels for the antenna or cable input, which enables you to add a new channel that becomes available or hide a channel you want to omit when browsing channels.

1. Optional: tune to the channel you want to add or delete.
2. Press **Menu**. Use the arrow buttons to select the **Source** menu and press OK. Use the arrow buttons to select **Channel setup** and then **Edit Channels** and press OK.
3. Use the arrow buttons to specify the channels you want to add or delete.
4. Press **back** to close the list.

Setting Up Favorite Channels

You can quickly tune to your most-watched cable channels by creating a list of favorite channels. Only channels received through cable input can be included in the list of favorite channels — antenna channels cannot be included.

To tune to a favorite cable channel:

- Press **Favorites** one or more times.

To add a channel to your favorites (or delete a channel):

1. Press **Menu**. Use the arrow buttons to select the **Source** menu and press OK.
2. Use the arrow buttons to select **Channel setup** and then **Favorite channels** and press OK.

Using the On-Screen Menu

Changing Settings Using the Menu

You can change television settings using the on-screen menu. These steps show the general operation, but you can always look for the prompts near the bottom of the menu screen.

1. Press **Menu** to display the on-screen menu.
2. Press the arrow buttons to highlight the desired menu, then press OK to open that menu.
3. Press the arrow buttons to highlight the desired setting, then press OK.
4. Press left and right or up and down to adjust the setting, as prompted.
5. To return to a previous menu, press **back** one or more times.
6. To close the on-screen menu, press **Menu**.

NOTE: You can also use the buttons on the television to work the on-screen menu.

- The **Menu** button opens the menu and also corresponds to **back**.
- Use the **arrow/OK** keys for navigation.

Picture Menu

Some picture adjustments are used only for certain input sources. Unavailable adjustments are shown in gray in the on-screen menu.

Setting	Description
Picture mode	Adjusts color and picture settings to one of several combinations designed for different types of viewing situations. You can change the picture mode at any time to get the best picture from different sources in different environments. You can also customize each picture mode for each source.
Brightness	Brightens or darkens the picture.
Contrast	Sets the difference between light and dark areas.
Sharpness	Sharpens or softens the picture.
Noise reduction	Automatically reduces static in the picture.
Color saturation	Adjusts the intensity of colors.
Advanced color	Adjusts advanced color settings.
Gamma	Enhances mid-tone areas of the picture.
Tint	Shifts colors toward red or green.
Color temperature	Shifts colors toward red or blue.
R Gain, G Gain, B Gain	Adjusts the amount of red (R), blue (B), and green (G). If you change any of these settings, the Color temperature setting automatically changes to Custom.

Setting	Description
Brightness boost	Forces higher brightness. Off allows the most natural colors. On allows the brightest picture. (Lamp television only)
Vibrant Black™	Enhances the contrast in dark images. (LED television only.)
Reset	For the current source, restores all picture settings to their default settings.

Advanced Picture Menu

Setting	Description
Aspect	Selects how the picture fits on the screen. You should find one setting that fits the complete picture on the screen without distortion.
Film mode	Automatically detects 3:2 film content and provides the best picture detail.
H Position	Adjusts the picture left or right within the projection area for a computer signal.
V Position	Adjusts the picture up or down within the projection area for a computer signal.
DVI color	Adjusts the digital-video color range when not automatically defined. Set to Standard unless you are viewing DVI output from a computer or "extended DVI" output.
DVI Range	Extends the dynamic range to take advantage of the full range from Personal Computers (PCs) or other extended range devices.
Reset	Restores all Advanced Picture menu settings to factory default settings.

Sound Menu

Setting	Description
Volume	Adjusts the loudness of the sound.
Balance	Adjusts the relative loudness of the left and right channels.
Internal speakers	Sets whether the television speakers are turned on.
Standard audio	For standard television programs, sets the type of sound: stereo, monaural, or a secondary audio program (SAP).
DTV audio	For DTV (Digital TV), sets the language of the audio program.
SRS TruSurround XT™	Virtualized 5.1 surround sound experience over two speakers.
Advanced sound	Adjusts advanced sound settings. Not all channels provide all options.
TruBass	When SRS TruSurround XT is <i>on</i> , this slider adjusts the level of bass response.
Dialog Clarity	When SRS TruSurround XT is <i>on</i> , this slider adjusts the level of improved dialog intelligibility.
Treble	When SRS TruSurround XT is <i>off</i> , this slider adjusts the loudness of higher pitches.
Bass	When SRS TruSurround XT is <i>off</i> , this slider adjusts the loudness of lower pitches.
Reset	Restores all sound settings to their default settings.



Source Menu

Setting	Description
Source	Shows the list of sources so you can choose a source.
Channel Setup	Sets up the available channels.

Setting	Description
Frequency plan	Changes the frequency of the display.
Auto search	Scans all channels on the input device for valid channels.
Edit channels	Adds or removes channels from the listing.
Edit favorites	Adds or removes favorite channels.
Dual Picture	Turns on and configures the dual picture mode to display more than one picture on the television.
Dual mode	Turn the dual picture mode on or off and specifies the display.
Secondary Source	Specifies the input source for the second picture.
Size	Specifies the size for the second picture.
Layout	Specifies the position of the second picture.
Cable card	Initializes and configures the CableCARD in the television.

Setup Menu

Setting	Description
OSD Language	Selects the language used by the on-screen menu.
Time	Sets up the clock.
Time Zone	Sets the time zone.
Daylight Savings	Sets how daylight savings is configured.
Sleep Timer	Sets or shows how long the television will stay on before automatically turning off. When activated, this function operates only one time.
Closed Caption mode	Sets whether closed captions are shown. On mute displays captions only while sound is muted.
Closed Caption	Configures television closed captions for the antenna and cable inputs.
Standard CC	Selects a caption option for standard channels.
DTV CC	Selects the closed caption option for DTV (Digital Television) channels.
Customize DTV CC	Adjusts the configuration for captions on DTV (Digital Television). If you change any settings, DTV CC mode automatically changes to Custom.
Lock	Configures the television to place a password to prohibit viewing of channels.
Password	Places a password on channels based on their content.
Movie blocking	Allows or blocks movies with specific movie ratings.
TV blocking	Allows or blocks programs with specific television ratings.
Menu timeout	Sets how many seconds the on-screen menu waits for input before it closes.
Factory reset	Restores all menu settings to factory default settings.
About	Displays information and status for the television.

5 Fixing Problems

Maintaining the Television

The television is designed to require very little maintenance. For best performance, keep the television clean, and replace the lamp module when the television displays a warning message.

Cleaning the Television

Keep the television clean as follows:

- Keep the television in an area free from excessive dust and dirt. You cannot clean any of the television's internal surfaces.
- Wipe the screen and case with a soft, dry cloth. Do not use water, polish, solvent, or other substances.
- Use a vacuum cleaner to clean dust from the air vents on the back and sides of the television. Do this at least yearly, or more often if there is visible accumulation.

Forgotten Passwords

If you have parental controls set on your television and forget your password, turn off the television. Then press the following sequence of six buttons on the remote control: **Menu**, 000, OK, power. This allows access to the **Lock** menu without entering a password, but only until you turn off the television. You must create a new password before you can change lock settings or view blocked programs.

Replacing the Lamp Module

As the television operates over time, its lamp module gradually becomes less bright and more susceptible to breakage. You can install a new lamp module anytime to bring the television up to factory-fresh brightness. We recommend replacing the lamp module after approximately 6000 hours of service.

△HP replacement lamp: L21 14A



CAUTION: We recommend that the lamp be exchanged at or before the end of the lamp's rated life — 6000 hours of use — because after that, the risk of the lamp rupturing could increase. High-temperature glass fragments from a ruptured bulb can cause injury, fire, or damage to property.



CAUTION: Replacing the lamp module requires special considerations:

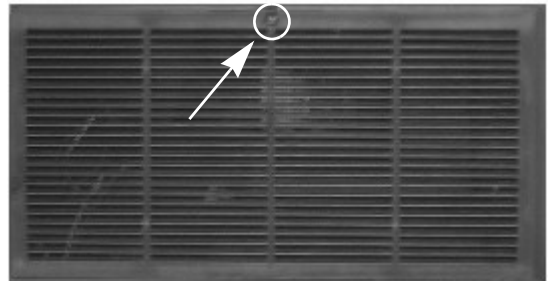
- Carefully read the complete instructions for "Replacing the Lamp Module" in this Section 5 before replacing the lamp module.
- To reduce the risk of injury, use extreme care when removing the lamp module, because broken glass might be present.
- The lamp contains a small amount of mercury. If the lamp breaks, adequately ventilate the area where the breakage occurred, discard any nearby food and drink, and thoroughly clean the table surface around the television. Wash your hands after cleaning the area or handling a broken lamp. Disposal of this lamp might be regulated because of environmental considerations.



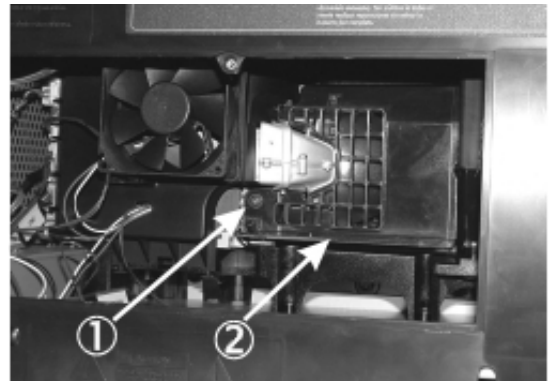
NOTE:

- For disposal or recycling information, contact your local authorities or the Electronic Industries Alliance at www.eiae.org.
 - You can find safety information about the lamp at www.hp.com/hpinfo/globalcitizenship/environment/productdata.
 - Consult the installation instructions packed with the replacement lamp module for any updates to the following.
-

1. Turn off the television and allow it to cool for at least 30 minutes.
2. After the 30 minutes (or more) has elapsed, unplug the power cord to remove AC power from the television.
3. On the back of the television, unscrew the single slotted screw located at the top center edge of the lamp access cover, then lift and remove the cover.



4. Loosen the screw (1) on the lamp module (the screw does not come completely out), then pull out the module using its handle (2).
5. Insert the new lamp module into the opening, firmly press it into place, and tighten the screw (1) loosened in step 4.



6. Insert the tabs on the lower edge of the lamp cover into the openings in the case. Position the cover and replace the screw removed in step 3.



7. Plug in the power cord and turn on the television. If the lamp does not turn on after the warm-up period, reinstall the lamp module by repeating the steps above.

Replacing the LED Module

The LED module is not a customer-replaceable part. If this part is need of repair, contact HP service personnel. Refer to “Support and Repair” on page 45.

6 Support and Repair

Contacting HP Technical Support

HP provides expert advice on using your HP HDTV (High-Definition Television), and can help you solve problems you might have with your television. Support options and availability vary by product, country/region, and language.

To get the best, most efficient results, use the HP support process in the following order.

Step 1: HP Documentation

Review the owner's manual and setup guide included with the television. You'll often find the answers to many of your questions in these documents.

Step 2: HP Technical Support

HP Technical Support offers instant Internet access to support information, helpful tips, and the latest updates, 24 hours a day, seven days a week, at no additional cost to you.

Visit our Web site: **www.hp.com/support**.

HP Technical Support Web Sites

By connecting to the Internet, you can obtain a wide variety of information about your television, including product help and user forum information.

HP Technical Support Email

HP's email support provides you with direct, one-to-one assistance from an HP service technician. Email support is a great way to ask a specific, detailed question about your situation. Many emails are answered within an hour.

Step 3: HP Telephone Support

HP provides telephone support at no additional cost for as long as you own your television. (Standard phone company charges do apply.) Telephone support is available in any country where the product is distributed by HP.

Before Calling

Before calling HP for support, be sure to try steps 1 and 2, above.

If you can't solve the problem using these resources, call an HP service technician at one of the numbers listed below. Please make sure to have your television easily in reach, and be ready to provide the following information:

- The television model and serial numbers.
- Any messages that were displayed when the situation occurred.
- When did this happen?
- Has this happened before? Can you re-create it?
- Did you add any new hardware or software before this situation began?
- What have you tried to solve the problem?

Support Phone Number

If you need help solving a problem, contact HP telephone support at one of the following numbers.

Visit **www.hp.com/support** for the latest phone number for your country or region.

- Canada: 1-800-474-6836 or 1-800-HP INVENT
- United States: 1-800-474-6836 or 1-800-HP INVENT

For Repair Service

If you suspect that your HP television needs repair, call HP telephone support. An HP service technician will diagnose the problem and coordinate the repair process. HP support will direct you to the best solution, through either an authorized service provider or an HP facility. Repair covered by the limited warranty is provided at no additional cost during the limited warranty period. After the warranty period, you will be quoted a repair cost.

7 Reference Information

This chapter lists the specifications, safety information, and regulatory information for the HP HDTV (High-Definition Television).

Specifications

Because HP continually improves its products, the following specifications are subject to change. For the latest specifications, visit the HP Web site at www.hpshopping.com.

	IDB5220N (Lamp)	ID5226N (Lamp)	ID5286N (LED)
Screen	52" diagonal size 16:9 widescreen		
Size	52 inch: 50" x 37" x 15"		
Weight (without stand, if applicable)	TV only: <85 lbs.	TV only: <85 lbs.	TV only: <95 lbs.
Resolution	1280 x 720	1280 x 720	1920 x 1080
Technology	DLP technology featuring HP Visual Fidelity technology Dual picture with dual tuner (PIP, PBP) Dark Video Enhancement		
Connection panel	Accessible from rear and side		
RF inputs	1- Antenna (F-type) 1 - Cable (F-type)		
Video inputs	2 - HDMI 2 - Component-video (YPbPr) 2 - S-video 3 - Composite-video (2-Rear I/O & 1-Side I/O)		
Audio inputs	5 - Stereo (left and right RCA)		
Digital Audio Inputs	1 - HDMI input has a separate Analog Stereo-Audio input to support DVI		
Audio outputs	1 - Stereo (left and right RCA) adjustable level 1 - Coaxial Digital-Audio output (for external amplifier)		
CableCARD	CableCARD ready (DCR™ 1)		
Video compatibility	Antenna: NTSC, ATSC, 480i/p, 720p, 1080i Cable: NTSC, QAM, ClearQAM, 480i/p, 720p, 1080i Composite/S-video: NTSC, 480i Component: 480i/p, 720p, 1080i/p* HDMI: 480i/p, 720p, 1080i/p*, VGA, SVGA, XGA, WXGA, SXGA		
Audio Features	2 Channel Stereo sound system Left and right full range stereo speakers 15 watts per channel Auto volume correction, Dynamic audio correction, can be set by user		
Audio Functions	Volume control, mute, balance, treble, bass, Virtual Surround Sound MTS: Mono, Stereo, SAP		

Lamp	150 W 6000-hour average lamp life (to half of original brightness) HP replacement lamp module: L2114A	Not applicable. (This television uses LED technology.)
Security	V-chip for antenna and cable inputs Parental lock prevents viewing of unapproved content and channels	
Power	120 V nominal at 60 Hz 300 W (lamp) maximum; 250 W (LED) maximum	
Environment	Operating: Temperature: 5 to 35 °C (41 to 95 °F) Humidity: 10 to 85% RH, non-condensing Altitude: up to 3,000 m (10,000 ft), up to 25 °C (77 °F) Storage: Temperature: -20 to 60 °C (-4 to 140 °F) Humidity: 10 to 85% RH, non-condensing Altitude: up to 9,000 m (30,000 ft)	